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ABSTRACT

Student employment while in college during 1980-1984 is presented, based on the High School and Beyond data for 1980 seniors. Who was working, how much was earned, what kind of jobs students held, and how employment was related to college persistence are described. Data are limited to traditional college students during 1980-1984. An introduction looks at: the purpose; high school and beyond data; analysis procedures; and organization of this report. Chapters focus on the following: people working in college; amounts college students earned; the number of different jobs college students had; kinds of jobs college students had; number of hours per week college students worked; hourly earnings; and the relationship of work to persistence in college. Variables of type of institution, academic year, race/ethnicity, family income, and ability level were considered. Among the findings are: a greater concentration of jobs in the service sector among college students than in the total civilian labor force, with 23% of the student jobs were in occupations connected with the service industry; about 1 in 12 students worked more than full time while attending college full-time, but 25% worked less than 20 hours per week during the academic year; and those who worked during the academic year improved their persistence, while those who worked in the summer did not. Three appendices discuss: methodology and technical notes, accuracy of estimates, and confidence levels; supporting tables for figures one through four; and occupational classification. Tables and figures are described. (SM)

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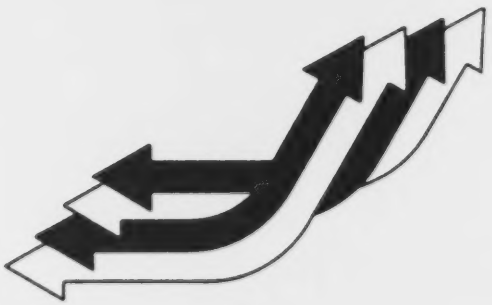

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Analysis Report June 1988

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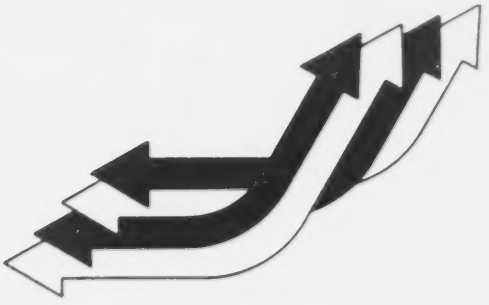
College Students Who Work: 1980–1984 Analysis Findings from High School and Beyond

C. Dennis Carroll
and
Teresita L. Chan-Kopka
National Center for Education Statistics



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Foreword

The Center for Education Statistics, with support from several other government agencies, has sponsored three longitudinal studies of U.S. students: the National Longitudinal Study of the High School Class of 1972 (NLS-72), the High School and Beyond (HS&B), and the National Education Longitudinal Study of 1988 (NELS:88).

This report, based on the HS&B data for 1980 high school seniors, describes student employment while in college for 1980-84. The information presented shows who was working, how much was earned, what kind of jobs students held, and how employment was related to college persistence. The analyses were limited to traditional college students during 1980-84; that is, they entered a postsecondary institution in the year immediately following high school graduation (academic year 1980-81); pursued their studies full time; and if they stopped attending school or dropped out, they were deleted from subsequent analyses. The data analyzed are available for secondary analyses of the topics covered in this report and the Center for Education Statistics encourages such analyses.

Samuel S. Peng
Director
Postsecondary Education Statistics Division

Acknowledgments

Many people and organizations have contributed generously to the design and implementation of the High School and Beyond (HS&B) study. Unfortunately, it is not possible to mention the names of all those who helped plan and carry out HS&B. However, several individuals deserve special thanks for helping with funding, solving field problems, and improving the quality of HS&B, including Calvin Jones and Penny Sebring from the National Opinion Research Center, Gil Garcia and Edward Fuentes of the Office of Bilingual Education and Minority Language Affairs, Ricky Takai and Val Plisko the Office of Planning, Budget and Evaluation, and Jeff Owings and David Sweet of the Center for Education Statistics.

This report was reviewed in the U.S. Department of Education by Charles Cowan, Peter Stowe, and Gayle Thompson Rogers, all with the Center for Education Statistics; and Dan Morrisey, Office of Planning, Budget and Evaluation; and Paul Hill, Office of Postsecondary Education. Julianne Still Thrift of the National Institute of Independent Colleges and Universities also reviewed the report. While reviewers' comments were helpful, insightful, and well-informed, any errors or limitations in this report are the sole responsibility of the authors.

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Executive Summary

Student workers are a unique part of the labor force, and their employment characteristics are also unique. By virtue of their studies, students may be limited in the location of employment, hours of employment, and (especially for traditional students) prior job experience. This report answers several questions concerning employment during college, and this section summarizes them. The context of the data is an important consideration for interpreting these findings. The data were collected for the academic years (AY) beginning with 1980-81 and ending with 1983-84. Several indices of economic behavior are relevant to this period. For the 18- to 19-year-old total population, the unemployment rates were 16.2 percent during the 1980 calendar year, 22.1 percent during the 1981 calendar year, 21.1 percent during 1982, and 17.4 percent during 1983. These high unemployment rates were due in large part to the two back-to-back recessions from 1980 to 1984. The minumum wage rates for this period were $3.10 per hour in 1980 and $3.35 during 1981-84. Finally, the costs of higher education were increasing during this period. From AY 1980-81 to AY 1983-84 the cost of higher education, as measured by the Halstead index (a higher education cost index similar to the current price index), exceeded the rate of inflation.

Findings in this report, as one might expect, show a greater concentration of jobs in the service sector among college students than in the total civilian labor force. During the 4 academic years, 23 percent of the student jobs were in occupations connected with the service industry. The corresponding estimates for the total labor force were 13.2 percent for both (calendar years) 1980 and 1981. The estimates were 13.6 percent for the 1982 calendar year, 13.7 percentfor 1983, and 13.5 percent for 1984. There was a 3 percent increase for service jobs in 1982, during the height of the last recession. In recent years, the service or convenience industry expanded as a result of demographic, social and economic developments.

Who was working in college?

Slightly more than half of first-year college students were working during the summer as well as the academic year. The percentage of those employed increased among 2nd-year students, then dropped for the third- and fourth-year students. Students from private 4-year colleges and universities were more likely to work during the summers and during the academic years than students from public 4-year institutions. Females were more likely to work than males. Middle income students were more likely to work during the academic year than low or high income students. Finally, high ability students were more likely to work during the summers than low ability students.

How much were they earning?

The average first-year student attending a private 4-year college or university earned $812 during the summer and $211 during the academic year. Corresponding estimates for students attending public 4-year institutions were $792 and $133. Earnings increased during the second

year and declined in the third and fourth years. Females earned less than males during the summer. Students from high income families earned more than students from low income families during the summer. High ability students earned more than low ability students during the academic year, and especially so during the summer.

How many different jobs did they have?

About two-thirds of the employed students held only one job during a summer or academic year period. However, females were more likely to have three or more jobs during an academic year than males. Similarly, high ability students were more likely to have three or more jobs during an academic year than low ability students.

What kinds of jobs did they have?

College students' jobs were spread over 19 categories of occupations. One of the biggest shifts over time was the increasing percentage of students in technical/professional jobs. About 1 in 20 first-year students held technical/professional jobs during the summer, but over one-fourth of the fourth-year students held technical/professional jobs. Food service and sales/office jobs were types of jobs held frequently by students.

How many hours per week did they work?

Students worked longer hours per week, especially during the academic year, than one might expect. About 1 in 12 students worked more than full time (41 or more hours per week) while attending college full time. About one-fourth of the full-time college students worked less than 20 hours per week during the academic year. Of course, they worked more hours in the summer than during the academic year, but only by about 2 or 3 hours per week on average. Female students averaged fewer hours of work per week than males. Asians averaged fewer hours per week than whites.

How much were they paid per hour?

Hourly pay rates for college students were somewhat higher than the national minimum wage. First-year students averaged $4.44 per hour during the summer and $4.72 during the academic year. In their fourth year, they averaged $5.57 per hour during the summer and $5.05 during the academic year. The hourly pay rates varied substantially by type of occupation. Blacks earned about 50 cents per hour less than whites from their summer jobs, and about 25 cents per hour less from their academic year jobs.

How was working related to persistence in college?

Those who worked during the academic year improved their persistence, while those who worked during the summer did not. Overall, about 85 percent of first- and second-year students persisted in college. About 95 percent of third- and fourth-year students persisted. Corresponding rates for unemployed students were 83, 83, 94, and 89 percent. The rates of persistence for students who earned $200 or more each year during the 4 academic years were 93, 88, 99, and 97 percent, respectively.

Introduction

Many college students work. Some attend school part time and work full time; others work only in the summer; others work only during the academic year. As college costs have increased, employment has become an increasingly important source of college financing.

Since 1964 (beginning with the Economic Opportunity Act), the Federal Government has funded the College Work Study (CWS) program to stimulate and promote the part-time employment of students with great financial need. During 1980 to 1984, CWS appropriations were $550 million, $528 million, $590 million, and $555 million, respectively. However, CWS is only one of many sources of jobs for college students. Some student employment, like CWS, is combined with grants and loans administered by the college financial aid office. A substantial portion of student employment is not "packaged". That is, many students find jobs without the assistance of their colleges.

Many need-based grant programs consider family and student sources of financing in the calculation of awards. Student contributions to college costs may come from several sources, but one of the most frequent is employment. For some college students, employment is necessary for their continued enrollment; for others, employment only generates increased discretionary income. Finally, some students find jobs related to their field of study in college. For these students, employment may improve the relevance of coursework and improve their chances of post-graduation employment.

Purpose

This report presents analyses of student employment during academic years 1980-81 to 1983-84. The analyses respond to the following questions:

Who was working in college?
How much were they earning?
How many different jobs did they have?
What kinds of jobs did they have?
How many hours per week were they working?
How much were they paid per hour?
How was working related to persistence in college?

Though each of these questions could be the subject of a major research report, this report provides descriptive answers only--simple averages and percentages for several groups and subgroups of students. These simple estimates are presented based on the results of regression analyses.

The High School and Beyond Data

All of the analyses presented in this report were based on the senior cohort of the High School and Beyond (HS&B) study. HS&B began with a nationally representative sample of high school seniors in 1980. During this base year, students' responses to questionnaire items (including sex,

race/ethnicity, and family income level) were gathered. In addition, students were tested during the base year of the study. These test scores also were used to produce the ability level measures used in this report.

The HS&B seniors were surveyed again in 1982 and 1984. In each of the questionnaires used, items were included to identify colleges and other postsecondary institutions they had attended and their employment histories. Data concerning postsecondary enrollments consisted of school names (which were coded for merging with other files), starting and ending months, and full- or part-time status. The employment histories included the types of occupations, starting and ending months, salary data, and hours worked per week.

In 1984, the student financial aid offices at the postsecondary institutions attended by HS&B seniors were surveyed. Records were collected concerning the financial aid students received and CWS awards were coded for each HS&B senior.

Each of the above data sources required analysis prior to the preparation of this report. As is true with most self-reported data, the pattern of responses sometimes display anomalies that require adjustments. The preliminary analyses edited, cleaned, and adjusted anomalous self-reported data for use in the analyses presented.

Student background characteristics. The HS&B seniors' reports of sex and race/ethnicity are very consistent. Most of the inconsistencies were resolved by analyzing item nonresponse.

A single test composite was developed using reading, vocabulary, and mathematics subscales. Therefore, the quartiles of this test composite are quite stable and reliable.

The family income levels reported by students were more problematic than the other reported student background characteristics. Comparisons of student reports with those of their parents identified several problems. However, the parent sample included in HS&B was too small to use for the analyses in this report, so, an outlier analysis was conducted for the student reported family income variable, using the parental data as the benchmark. All analyses included in this report were conducted using the student reports of family income in two forms: including outliers and excluding outliers. In most cases, family income relationships were found to be insensitive to the errors in the student reports, and in no cases were the errors in the student reports sufficient to influence the findings.

Postsecondary enrollments. The HS&B seniors' reports of their enrollment status in postsecondary education were analyzed several times before the analyses in this report were conducted. Some of these revealed that 36 percent of the 1980 high school seniors never enrolled in any postsecondary institution at any time during the 1980 to 1984 period. Concerning college persistence, 62 percent of the 1980 high school seniors enrolled in a private 4-year colleges or universities in 1980 persisted continuously and full time during the 4 academic years. The corresponding percentage for students in public 4-year colleges and universities was 51 percent.

The subsample of HS&B analyzed for this report was restricted to traditional college students; that is, those who entered postsecondary institutions in the year immediately following high school graduation (academic year 1980-81), and pursued their studies full-time, enrolling every year until graduation. The sample was restricted by removing students who shifted to part-time studies or did not re-enroll (or dropped out). This restriction had both positive and negative effects on this

report's applicability. Such a sample might be expected to be more homogeneous in terms of prior experiences and behaviors than a more inclusive sample. But the findings may not apply in general to all college students. A substantial percentage of today's college students are not the traditional college students--they are older, more likely to study part time, and may study for 5 or more years.

Employment histories. Analyses of the HS&B seniors' reports of employment identified several problems that may have influenced the results presented. The first group of problems centered on biases inherent in all self-reports. The employment history items were relatively complex matrix items that included several skip patterns. Respondents were allowed to provide yearly, monthly, weekly, or hourly pay rates. Starting and ending dates (or "I still have this job") were not limited; that is, no choices were provided and student answers could range over all months of data collection. Finally, there was no link between the 1982 and 1984 surveys. Analyses of these problems resulted in reasonably consistent data. For example, hourly pay rates were restricted to a $1.50 to $25.00 range. Missing end dates, in the presence of indications of continued employment, were imputed to the February 1982 or 1984 end date of the survey. Jobs with monthly salaries of less than $25.00 were ignored.

The second group of problems was the result of using monthly dates rather than the exact month and day. Specifically, if two or more jobs were reported for a given month, it could not be determined if they were held simultaneously or separately. We used the largest single monthly salary as the monthly total earnings estimate when more than one job was reported for a given month. Where the jobs were actually held simultaneously, this method underreports total earnings. Since there was no link between the 1982 and 1984 surveys, a job held through both periods will be reported as two jobs.

Finally, in a few cases students reported individual earnings less than the CWS amounts included in the financial aid office records. In these cases, the CWS amount was used.

Analysis procedures

For this descriptive report, simple estimates of percentages and averages were the major statistics. The major subgroup variables employed in analyses were as follows:

Type of postsecondary institution
- Public 4-year colleges and universities
- Private 4-year colleges and universities
- Public 2-year colleges
- Other postsecondary institutions (e.g., proprietary schools)

Academic year
- 1980-81
- 1981-82
- 1982-83
- 1983-84

Sex
- Male
- Female

Race/ethnicity
- White
- Black
- Hispanic
- Asian
- American Indian

Family income
- Less than $7,000
- $7,000 to 11,999
- $12,000 to 15,999
- $16,000 to 19,999
- $20,000 to 24,999
- $25,000 to 37,999
- $38,000 or more

Test quartile (ability level)
- Low (1st to 24th percentiles)
- Low middle (25th to 49th percentiles)
- High middle (50th to 75th percentiles)
- High (75th to 99th percentiles)

However, employment during college is too complex to be studied adequately with pair-wise comparisons of subgroups' percentages or averages. Clearly, all of these variables are related and this fact influences any analysis. For example, if family income is found to be related to an outcome, it is more likely that test quartile and type of postsecondary institution will also display a relationship. This multivariate structure, known for these variables, was incorporated into the analyses by using multiple regression techniques.

Although separate estimates are included for all subgroups (sometimes crossed using academic year and type of postsecondary institution) of interest in this report, not all of these estimates are discussed. A multiple regression of the outcome variable of interest on the subgroup variables identified the differences discussed in the text. The simple bivariate estimates were then employed as examples in the discussion. In other words, regression was used to detect when predictor variables (e.g., sex, race/ethnicity, family income) were sufficiently (uniquely) related to a dependent variable to discuss the descriptive estimates in the text.

Organization of this report

The remainder of this report is devoted to the research questions cited above. Chapter 1 focuses on *Who was working in college?* Chapter 2 is devoted to the question *How much were they earning?* Chapter 3 looks at *How many different jobs did they have?* Chapter 4 presents findings in answer to *What kinds of jobs did they have?* Chapter 5 deals with *How many hours per week were they working?* Chapter 6 focuses on *How much were they paid per hour?* Finally, chapter 7 is devoted to *How was working related to persistence in college?* Appendix A presents additional methodology and technical considerations for interested readers.

CHAPTER 1

Who Was Working In College?

Employment during college may occur during the academic year while a student is enrolled, during breaks (e.g., spring vacation), or during the previous summer. The HS&B data cannot distinguish the employment during breaks, but summer and academic year (AY) earnings can be separated. In some cases, summer jobs represent opportunities to earn and save funds for the coming academic year. In other cases, summer jobs may not result in savings. Indeed, they may actually result in loss of funds after living expenses are considered. Certainly, some students need the money earned by working. The jobs held and the money earned are not necessarily reflective of need, however. Wealthy students may have more contacts than needy students and these contacts may help them find better paying jobs. This chapter focuses on the characteristics of students who had a job while in college. For summer and academic year jobs, student characteristics are examined in relation to employment.

The regression on the percentage of the HS&B students who worked the previous summer or during the academic year is displayed in table 1. The regression model was estimated using a base group for comparisons (or dummy variable--0,1--predictors). For type of postsecondary institution, the base group was public 4-year; for academic year the base group was 1980-81; for sex the base group was males; for race/ethnicity the base group was whites; for family income the base group was students from families with incomes of $16,000 to $19,999; and finally, for ability level the base group was middle-high. Hence, the parameter estimates (raw coefficients, not betas) indicate the difference between the predictor and the base group. Relationships were identified using the unique contribution of each independent variable (e.g., sex) to the dependent variable (e.g., percentage working in the summer). The unique contribution of an independent variable was measured as the reduction in the predictive power associated with removing the independent variable from the full model (i.e., the R^2 without subtracted from the full model R^2). For example, to determine the unique contribution of type of postsecondary institution on summer employment, the full model R^2 of 0.0897 was compared with the R^2 of a reduced model. This reduced model included all of the predictors in the full model, except for the three predictors representing type of postsecondary institution. The R^2 for the reduced model without the type of postsecondary institution predictors was 0.0852, or a decline of 0.0045 from the full model. An F-test indicated that this R^2 decline was significantly different from zero (0.0000) at a 99.9 percent level of confidence[1]. Therefore, in spite of the fact that the type of postsecondary institutions students attend are related to their class standing or academic year, race/ethnicity, family income, and ability level, type of postsecondary institution was uniquely related to summer employment.

---

[1] All differences included in this report are significant at the .05 level or better unless otherwise stated.

Table 1.--Regression parameters for the percent of 1980 high school seniors who were employed during the summer before or during the academic year (AY) they attended college

Variable	df	Summer parameter estimate	During AY parameter estimate
Intercept	1	49.09	61.18
Type of institution			
Private 4-year		6.60	6.96
Public 2-year		-0.68	5.10
Other school		-8.13	1.23
R^2 without		0.0852	0.0568
F-test	3	19.15*	16.50*
Academic year			
1981-82		18.91	11.51
1982-83		-14.87	-19.51
1983-84		-19.73	-0.87
R^2 without		0.0156	0.0187
F-test	3	315.38*	173.67*
Sex			
Female		1.70	3.51
R^2 without		0.0894	0.0595
F-test	1	3.83	16.09*
Race/ethnicity			
Black		-4.82	-3.68
Hispanic		-2.49	-1.21
Asian		-4.70	-0.69
American Indian		5.88	-7.16
R^2 without		0.0888	0.0604
F-test	4	2.87	1.24
Family income			
Less than $7,000		-0.95	-4.90
$7,000-11,999		-1.80	1.77
$12,000-15,999		0.55	0.61
$20,000-24,999		2.36	-1.32
$25,000-37,999		0.82	-2.39
$38,000 or more		0.29	-10.61
R^2 without		0.0892	0.0533
F-test	6	1.06	15.47*
Ability level			
Low		-5.33	-3.64
Middle Low		-4.05	-0.15
High		5.06	1.83
R^2 without		0.0848	0.0601
F-test	3	20.85*	2.89
R^2	11623	0.0897	0.0608

* denotes p<.001.

The students' probabilities of summer employment were also related to academic year and ability level (table 1). On the other hand, employment during the academic year is related to type of postsecondary institution, academic year, sex, and family income. The percentage estimates for summer employment and separately for academic year employment, by type of postsecondary institution and academic year, are shown in tables 2 through 7. These estimates are used below to describe the relationships identified by the regression analysis.

Type of postsecondary institution. The regression parameters for the percentage of students working in the summer prior to enrollment suggest an ordering based on type of postsecondary institution. Students attending private 4-year colleges and universities in AY 1983-84 were more likely to have summer jobs than students attending public 4-year colleges and universities. Students attending public 2-year colleges were less likely to work in the summer than students attending 4-year colleges. Finally, students attending other types of postsecondary institutions were least likely to work in the summer. The descriptive estimates illustrate this finding. For example, 40 percent of the private 4-year students worked in the summer before AY 1983-84, while only 28 percent of the public 4-year students worked (tables 2 and 3). In addition, 48 percent of the public 2-year students were employed in the summer of 1980 (table 6), while 54 percent of the public 4-year students were employed. Similarly, students attending other postsecondary institutions (table 7) were less likely to work in the summer of 1980 than 4-year college students (54 percent for public 4-year students vs. 45 percent for others).

The regression parameters for employment during the academic year display a different pattern. Students attending public 4-year colleges and universities worked less during the academic year than all other types of students. For example, students attending private 4-year colleges and universities during AY 1982-83 were more likely to be employed than students attending public 4-year colleges (52 vs. 35 percent; tables 4 and 5).

Academic year. The regression parameters indicate that students attending colleges in 1980-81 worked less frequently than students in 1981-82, but more than students in 1982-84. For example, in the 4-year college and university sectors, there were large shifts in the percentage of working students over the 4 academic years. In public 4-year colleges and universities, 62 percent of the students were employed during AY 1980-81 (table 5). In AY 1981-82, the proportion of students working rose to 72 percent. In AY 1982-83, the percentage of students working declined to 35 percent, then rose to 61 percent in AY 1983-84. The pattern for summer jobs was similar during the AY 1980-81 to AY 1982-83 period (table 3). However, the percentage of public 4-year college and university students who were working the previous summer declined further between AY 1982-83 and AY 1983-84 (36 vs. 28 percent).

Sex of student. The regression parameters indicate that females were more likely to work during the academic year. For example, in public 4-year colleges and universities, 38 percent of females worked during AY 1982-83 and 32 percent of males worked (table 5).

Table 2.--Rate of employment of 1980 high school seniors who were enrolled in a 4-year private college or university, by selected student characteristics: Summer 1980-83

[In percent]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	56.7 (2.15)	73.5 (1.95)	46.3 (2.52)	40.3 (2.64)
Sex				
Male	56.8 (3.22)	73.7 (2.85)	43.8 (3.75)	35.7 (3.69)
Female	56.6 (2.77)	73.4 (2.74)	48.7 (3.72)	44.9 (3.54)
Race/ethnicity				
Hispanic	52.7 (7.56)	60.5 (9.64)	23.3 (7.30)	14.2 (6.16)
Asian	42.6 (11.02)	76.2 (8.45)	50.6 (10.39)	47.1 (9.73)
Black	50.5 (4.84)	67.3 (4.40)	24.0 (4.12)	19.1 (3.82)
White	57.8 (2.49)	74.5 (2.19)	49.1 (2.83)	42.8 (2.97)
Family income				
Less than $7,000	59.8 (8.72)	83.4 (5.51)	58.3 (11.13)	54.3 (13.18)
$7,000-11,999	60.9 (6.55)	69.2 (7.09)	24.9 (7.52)	31.7 (10.14)
$12,000-15,999	54.5 (6.52)	67.7 (7.10)	44.4 (9.26)	38.2 (10.17)
$16,000-19,999	56.9 (6.44)	80.0 (6.64)	45.7 (8.62)	38.3 (8.55)
$20,000-24,999	57.2 (5.05)	80.7 (4.52)	49.5 (6.69)	43.6 (7.06)
$25,000-37,999	56.0 (5.11)	70.8 (4.97)	44.9 (5.92)	39.6 (6.52)
$38,000 or more	59.7 (4.25)	73.4 (3.70)	51.2 (4.42)	50.1 (5.45)
Ability level				
Low	36.6 (7.68)	66.6 (8.16)	25.0 (11.10)	29.7 (12.43)
Middle low	48.7 (6.27)	67.2 (6.19)	33.5 (7.36)	21.5 (6.49)
Middle high	52.3 (4.25)	67.8 (4.94)	36.8 (5.51)	41.3 (6.10)
High	61.8 (2.98)	76.6 (2.94)	53.7 (3.51)	49.7 (3.75)

NOTE: Figures enclosed in parentheses are standard errors.

Table 3.--Rate of employment of 1980 high school seniors who were enrolled in a 4-year public college or university, by selected student characteristics: Summer 1980-83

[In percent]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	54.4 (1.67)	72.1 (1.56)	35.6 (1.85)	27.9 (1.66)
Sex				
Male	58.0 (2.29)	72.7 (2.25)	32.9 (2.54)	26.4 (2.50)
Female	51.3 (2.15)	71.5 (2.15)	38.1 (2.53)	29.2 (2.32)
Race/ethnicity				
Hispanic	52.6 (4.55)	67.8 (4.43)	28.5 (5.45)	20.0 (3.94)
Asian	58.3 (6.95)	72.5 (4.92)	32.1 (8.40)	15.4 (3.97)
Black	49.3 (3.14)	59.3 (3.36)	34.3 (3.95)	19.1 (2.62)
White	55.1 (1.93)	74.2 (1.83)	36.1 (2.09)	29.6 (1.95)
Family income				
Less than $7,000	39.3 (5.30)	60.0 (6.23)	39.1 (7.94)	14.2 (4.30)
$7,000-11,999	42.1 (4.71)	77.7 (4.18)	31.0 (5.21)	20.0 (4.67)
$12,000-15,999	55.2 (4.85)	66.0 (4.93)	36.3 (5.75)	23.9 (5.37)
$16,000-19,999	60.2 (4.14)	72.7 (4.17)	30.6 (4.60)	25.3 (4.70)
$20,000-24,999	51.6 (4.00)	74.1 (3.57)	43.2 (4.47)	32.2 (4.40)
$25,000-37,999	58.8 (3.50)	76.7 (3.26)	36.4 (4.01)	31.8 (4.07)
$38,000 or more	55.1 (3.63)	72.6 (3.40)	35.5 (3.61)	34.7 (4.04)
Ability level				
Low	52.1 (4.35)	59.0 (4.93)	21.2 (5.15)	17.9 (5.06)
Middle low	42.8 (3.48)	70.1 (3.29)	28.6 (3.93)	21.5 (4.18)
Middle high	53.8 (3.01)	69.7 (3.06)	33.6 (3.33)	28.3 (3.27)
High	55.6 (2.45)	74.3 (2.42)	38.7 (2.61)	32.2 (2.61)

NOTE: Figures enclosed in parentheses are standard errors.

Table 4.--Rate of employment of 1980 high school seniors who were enrolled in a 4-year private college or university, by selected student characteristics: Academic year 1980-81 to 1983-84

[In percent]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	63.6 (2.13)	72.7 (2.16)	52.1 (2.70)	63.8 (2.59)
Sex				
Male	66.5 (3.13)	69.8 (3.31)	48.6 (4.01)	59.7 (4.14)
Female	61.1 (3.09)	75.3 (2.76)	55.4 (3.35)	67.7 (3.34)
Race/ethnicity				
Hispanic	60.8 (7.77)	76.3 (9.19)	31.6 (8.71)	76.4 (7.11)
Asian	66.7 (13.67)	81.9 (6.76)	60.9 (8.82)	67.5 (9.82)
Black	70.7 (3.76)	78.6 (3.23)	44.3 (5.99)	74.5 (4.57)
White	62.9 (2.46)	71.8 (2.48)	53.4 (3.03)	62.7 (2.76)
Family income				
Less than $7,000	66.9 (8.59)	81.4 (5.88)	78.3 (7.88)	71.4 (13.97)
$7,000-11,999	80.3 (5.20)	77.1 (6.73)	42.4 (9.16)	56.9 (9.82)
$12,000-15,999	67.2 (6.17)	74.9 (7.14)	48.7 (9.45)	78.6 (7.74)
$16,000-19,999	68.4 (6.54)	80.7 (5.59)	67.3 (8.39)	73.6 (7.29)
$20,000-24,999	69.8 (4.70)	83.7 (4.82)	60.9 (6.44)	67.2 (6.92)
$25,000-37,999	59.6 (5.18)	72.2 (4.92)	50.6 (6.15)	59.0 (6.08)
$38,000 or more	57.9 (4.43)	64.1 (4.56)	52.2 (4.83)	54.2 (4.23)
Ability level				
Low	66.2 (6.92)	75.7 (7.74)	59.0 (11.39)	74.1 (12.41)
Middle low	49.6 (6.28)	69.2 (6.14)	37.7 (7.15)	49.4 (8.01)
Middle high	63.0 (4.31)	74.7 (4.40)	52.9 (5.82)	62.5 (5.77)
High	68.7 (2.84)	76.9 (2.65)	58.9 (3.49)	65.3 (3.55)

NOTE: Figures enclosed in parentheses are standard errors.

Table 5.--Rate of employment of 1980 high school seniors who were enrolled in a 4-year public college or university, by selected student characteristics: Academic year 1980-81 to 1983-84

[In percent]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	62.2 (1.49)	71.8 (1.63)	34.9 (1.66)	61.2 (1.80)
Sex				
Male	61.7 (2.26)	72.3 (2.23)	31.5 (2.34)	58.7 (2.78)
Female	62.7 (1.97)	71.4 (2.25)	38.2 (2.37)	63.6 (2.47)
Race/ethnicity				
Hispanic	66.5 (3.92)	73.8 (4.19)	33.5 (5.49)	61.5 (6.20)
Asian	62.2 (6.75)	83.5 (3.93)	33.3 (8.48)	62.6 (7.47)
Black	57.2 (3.03)	61.0 (3.47)	39.0 (3.70)	57.8 (4.13)
White	62.7 (1.75)	73.0 (1.89)	34.6 (1.86)	61.3 (2.04)
Family income				
Less than $7,000	48.2 (5.64)	58.9 (6.81)	41.1 (7.67)	73.5 (6.28)
$7,000-11,999	66.5 (4.69)	75.8 (4.54)	48.7 (5.63)	66.1 (5.57)
$12,000-15,999	64.8 (4.49)	72.8 (4.63)	38.1 (5.78)	65.7 (6.05)
$16,000-19,999	65.6 (4.13)	66.5 (4.64)	36.7 (4.93)	64.6 (5.12)
$20,000-24,999	66.5 (3.69)	74.6 (3.70)	39.6 (4.38)	57.3 (4.48)
$25,000-37,999	69.4 (3.13)	77.6 (3.02)	35.8 (3.99)	65.4 (4.02)
$38,000 or more	54.1 (3.70)	69.5 (3.57)	27.8 (3.23)	53.5 (3.91)
Ability level				
Low	60.3 (4.32)	63.2 (4.64)	25.6 (5.36)	56.0 (6.66)
Middle low	62.9 (3.27)	75.7 (3.21)	36.1 (4.50)	67.3 (4.18)
Middle high	59.4 (3.02)	71.1 (3.06)	37.2 (3.55)	60.5 (3.65)
High	63.5 (2.38)	72.2 (2.41)	34.7 (2.50)	59.8 (2.50)

NOTE: Figures enclosed in parentheses are standard errors.

Table 6.--Rate of employment of 1980 high school seniors who were enrolled in 2-year public institutions, by selected student characteristics: Summer 1980 and 1981, and academic year 1980-81 and 1981-82

[In percent]

Student characteristics	Summer		Academic year	
	1980	1981	1980-81	1981-82
Total	47.9 (2.01)	68.3 (2.19)	63.0 (1.85)	80.0 (1.81)
Sex				
Male	46.8 (2.80)	67.0 (3.22)	59.3 (2.79)	75.1 (2.85)
Female	49.0 (2.57)	69.6 (2.83)	66.4 (2.30)	84.7 (2.12)
Race/ethnicity				
Hispanic	55.2 (5.76)	63.3 (6.97)	67.3 (5.48)	73.2 (6.47)
Asian	32.8 (5.18)	52.4 (10.05)	45.3 (7.26)	85.1 (4.22)
Black	47.4 (3.93)	60.2 (5.15)	64.5 (3.67)	70.8 (4.84)
White	47.7 (2.34)	70.4 (2.53)	63.2 (2.14)	81.3 (2.11)
Family income				
Less than $7,000	42.7 (6.99)	51.3 (10.05)	62.2 (6.98)	63.8 (9.65)
$7,000-11,999	42.6 (5.33)	57.0 (6.50)	60.0 (5.19)	82.9 (4.42)
$12,000-15,999	48.5 (5.13)	68.3 (6.08)	67.4 (4.73)	80.0 (5.02)
$16,000-19,999	47.9 (4.73)	73.8 (5.44)	70.4 (4.42)	85.1 (4.19)
$20,000-24,999	51.0 (5.09)	65.9 (5.78)	57.3 (4.60)	80.7 (4.70)
$25,000-37,999	48.3 (4.47)	78.7 (4.03)	63.8 (4.25)	78.1 (4.21)
$38,000 or more	44.5 (5.26)	61.8 (6.41)	53.9 (5.48)	81.6 (5.30)
Ability level				
Low	40.5 (3.88)	64.3 (4.80)	58.5 (3.98)	74.8 (4.36)
Middle low	45.5 (3.81)	67.9 (4.11)	62.9 (3.63)	79.4 (3.52)
Middle high	48.9 (3.91)	68.6 (4.25)	63.1 (3.62)	80.7 (3.36)
High	56.0 (4.41)	67.0 (4.96)	64.4 (4.16)	77.0 (4.30)

NOTE: Figures enclosed in parentheses are standard errors.

Table 7.--Rate of employment of 1980 high school seniors who were enrolled in other postsecondary education institutions, by selected student characteristics: Summer 1980 and academic year 1980-81

[In percent]

Student characteristics	Summer 1980	AY 1980-81
Total	45.0 (3.12)	62.6 (2.93)
Sex		
Male	51.4 (5.53)	68.4 (4.79)
Female	41.2 (3.74)	59.1 (3.80)
Race/ethnicity		
Hispanic	44.3 (10.56)	54.2 (11.41)
Black	33.3 (4.99)	45.6 (5.53)
White	46.8 (3.73)	66.6 (3.37)
Family income		
less than $7,000	22.4 (5.77)	58.1 (8.77)
$7,000-11,999	47.1 (10.48)	61.8 (9.68)
$12,000-15,999	48.3 (8.47)	67.8 (7.68)
$16,000-19,999	48.1 (8.32)	63.2 (7.98)
$20,000-24,999	35.6 (6.49)	56.5 (7.47)
$25,000-37,999	39.7 (7.80)	59.7 (7.20)
$38,000 or more	57.7 (9.01)	58.8 (8.86)
Ability level		
Low	42.9 (5.84)	57.2 (5.91)
Middle low	39.4 (6.49)	65.2 (5.85)
Middle high	46.2 (5.70)	57.3 (5.78)
High	34.4 (7.43)	59.4 (8.41)

NOTE: Figures enclosed in parentheses are standard errors.

Family income. Family income levels were related to students' probabilities of working during the academic year. The regression parameters show that middle income students were more likely to work than high or low income students. In the public 4-year college sector in AY 1980-81, for example (table 5), the students from families with incomes above $38,000 were less likely to work than students from middle ($16,000-$19,999) income families (54 vs. 66 percent). These middle income students were also more likely to work than the lowest income (less than $7,000) students (66 vs. 48 percent).

Ability level. Student ability level (test quartile) was related to the probability of working in the summer prior to academic year enrollment. Generally, the high ability students were more likely to work in the summer than the low ability students. For example, in the private 4-year college and university sector (table 2), 37 percent of the low ability students worked in the summer of 1980 and 62 percent of the high ability students worked.

Chapter 2

How Much Were College Students Earning?

For some college students, their earnings are needed to meet college costs. Because some financial aid programs are packaged after family and student sources of financing are considered, the dollar value of student earnings is important. The amount the typical college student earns, including zero amounts for those earning nothing, is related to how reasonable the programmatic rules are. This chapter presents analyses of the typical students' average summer and academic year earnings. Because this report focuses on the typical college student rather than the typical earner, these analyses are not restricted to students who worked. However, interested readers may calculate the average earnings for workers by dividing the average earnings presented in this chapter by the corresponding percent of working students presented in chapter 1.

Table 8 displays the regression of the amount of earnings of the HS&B students (including zero amounts for those not working), and shows that traditional college students' summer earnings were related to type of postsecondary institution, academic year, sex of the student, family income, and ability level. Academic year earnings were related to type of postsecondary institution, academic year, and ability level. The average amount of earnings (including zero amounts for those not working), by type of postsecondary institution and academic year, are shown in tables 9 through 14. These estimates are used below to illustrate the regression findings.

Type of postsecondary institution. The summer and academic year regression parameters indicate that the average student enrolled in a private 4-year college or university earned more than the average student enrolled in a public 4-year college or university. For example, the average student in private institutions earned $1,019 in the summer of 1983 (table 9), while the average student in public institutions earned $564 (table 10). The regressions also suggested that in public 2-year schools students earned less than students in 4-year public schools in the summer, but the coefficient reversed for academic year earnings. For 1980 summer earnings, students in public 2-year schools earned $629 (table 13) while students in public 4-year schools earned $792 (table 10). However, during the academic year (1980), students in public 2-year schools earned $112 (table 13) and students in public 4-year schools earned $133 (table 12).

Finally, the regression indicates that students enrolled in other postsecondary institutions earned less than those in public 4-year institutions during the summer and academic year periods. For 1980 summer earnings, students in other types of postsecondary schools earned $559 (table 14) while students in public 4-year schools earned $792 (table 10). During academic year 1980-81, students in public 4-year schools earned $133 (table 12) and other students earned $98 (see table 14).

Table 8.--Regression parameters for the amount a 1980 high school senior earned during the summer before or during the academic year (AY) they attended college

Variable	df	Summer parameter estimate	During AY parameter estimate
Intercept	1	1.49	1.34
Type of institution			
Private 4-year		0.20	0.24
Public 2-year		-0.01	0.07
Other school		-0.24	-0.02
R^2 without		0.0515	0.0796
F-test	3	35.87*	17.34*
Academic year			
1981-82		0.61	0.24
1982-83		-0.39	-0.37
1983-84		-0.53	.00
R^2 without		0.0275	0.0161
F-test	3	134.81*	285.83*
Sex			
Female		-0.01	0.09
R^2 without		0.0585	0.0837
F-test	1	21.02*	0.00
Race/ethnicity			
Black		-0.15	0.01
Hispanic		-0.08	-0.02
Asian		-0.17	-0.06
American Indian		0.12	-0.16
R^2 without		0.0600	0.0828
F-test	4	0.62	2.85
Family income			
Less than $7,000		-0.04	-0.08
$7,000-11,999		-0.06	0.07
$12,000-15,999		0.02	-0.01
$20,000-24,999		0.10	-0.09
$25,000-37,999		0.06	-0.13
$38,000 or more		0.06	-0.35
R^2 without		0.0455	0.0829
F-test	6	30.30*	1.69
Ability level			
Low		-0.17	-0.09
Middle low		-0.11	-0.01
High		0.16	0.05
R^2 without		0.0592	0.0791
F-test	3	4.12**	19.45*
R^2	11623	0.0602	0.0837

* denotes p<.001.

** denotes p<.01.

NOTE: Earnings were transformed using base 10 logarithms, zero earnings were assigned zero logged values.

Table 9.--Average earnings of 1980 high school seniors who were enrolled in a 4-year private college or university, by selected student characteristics: Summer 1980-83

[In current dollars]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	$ 812 (52.1)	$1,213 (77.0)	$ 950 (73.0)	$1,019 (101.1)
Sex				
Male	836 (62.3)	1,271 (90.8)	948 (109.4)	943 (129.9)
Female	790 (78.9)	1,162 (115.5)	952 (105.3)	1,094 (149.3)
Race/ethnicity				
Hispanic	733 (155.5)	821 (148.0)	353 (115.1)	238 (137.8)
Asian	698 (223.5)	1,064 (168.8)	1,173 (371.5)	1,092 (351.1)
Black	774 (108.7)	1,076 (135.8)	488 (114.3)	349 (79.0)
White	822 (59.6)	1,242 (87.3)	996 (80.3)	1,084 (112.6)
Family income				
Less than $7,000	747 (157.5)	919 (110.9)	876 (387.0)	604 (201.6)
$7,000-11,999	711 (164.0)	790 (106.2)	1,041 (685.5)	1,155 (679.7)
$12,000-15,999	763 (182.8)	916 (169.6)	653 (184.4)	680 (219.8)
$16,000-19,999	618 (83.0)	1,001 (115.5)	755 (172.5)	684 (188.0)
$20,000-24,999	687 (84.9)	1,163 (115.6)	858 (140.5)	1,204 (253.5)
$25,000-37,999	792 (92.9)	1,334 (187.1)	1,018 (190.1)	773 (157.0)
$38,000 or more	1,070 (128.7)	1,358 (115.3)	1,066 (126.2)	1,299 (184.0)
Ability level				
Low	350 (84.7)	927 (257.2)	408 (207.9)	977 (644.2)
Middle low	960 (263.6)	1,113 (138.1)	895 (316.3)	238 (85.2)
Middle high	702 (88.5)	866 (88.8)	695 (145.5)	972 (218.5)
High	793 (54.2)	1,169 (71.3)	974 (94.5)	1,203 (116.8)

NOTE: Figures enclosed in parentheses are standard errors.

Table 10.--Average earnings of 1980 high school seniors who were enrolled in a 4-year public college or university, by selected student characteristics: Summer 1980-83

[In current dollars]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	$792 (42.9)	$1,121 (46.7)	$692 (46.7)	$564 (43.0)
Sex				
Male	994 (72.3)	1,365 (85.6)	729 (74.7)	570 (63.1)
Female	614 (38.2)	903 (43.0)	657 (57.4)	559 (61.1)
Race/ethnicity				
Hispanic	755 (77.2)	1,082 (148.1)	421 (83.0)	404 (105.1)
Asian	873 (183.9)	1,031 (195.3)	593 (184.8)	220 (74.4)
Black	603 (46.9)	861 (63.9)	701 (109.5)	316 (52.6)
White	822 (51.4)	1,167 (55.4)	708 (54.3)	609 (51.1)
Family income				
Less than $7,000	467 (69.6)	893 (221.0)	978 (307.9)	468 (318.7)
$7,000-11,999	720 (150.4)	980 (104.5)	482 (89.8)	351 (115.4)
$12,000-15,999	836 (148.1)	1,064 (213.7)	690 (152.7)	380 (90.9)
$16,000-19,999	751 (78.1)	1,004 (81.5)	571 (101.1)	657 (165.7)
$20,000-24,999	829 (111.2)	1,106 (86.8)	868 (117.9)	635 (117.2)
$25,000-37,999	925 (107.4)	1,367 (141.8)	702 (93.7)	634 (96.0)
$38,000 or more	848 (108.4)	1,283 (119.8)	703 (95.8)	808 (121.7)
Ability level				
Low	719 (102.0)	846 (108.5)	396 (130.8)	386 (175.7)
Middle low	578 (63.3)	1,098 (131.3)	542 (97.8)	385 (106.5)
Middle high	794 (87.6)	1,216 (123.5)	644 (80.4)	558 (90.4)
High	860 (76.2)	1,093 (62.3)	753 (69.9)	672 (63.4)

NOTE: Figures enclosed in parentheses are standard errors.

Table 11.--Average earnings of 1980 high school seniors who were enrolled in a 4-year private college or university, by selected student characteristics: Academic year 1980-81 to 1983-84

[In current dollars]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	$211 (14.9)	$239 (18.1)	$225 (23.6)	$273 (30.1)
Sex				
Male	205 (22.0)	226 (27.7)	201 (28.7)	257 (34.6)
Female	216 (20.2)	250 (24.0)	248 (35.9)	288 (48.6)
Race/ethnicity				
Hispanic	286 (54.7)	221 (48.4)	216 (69.1)	327 (83.2)
Asian	194 (70.0)	207 (75.1)	290 (85.5)	250 (81.5)
Black	346 (33.7)	359 (42.0)	354 (54.9)	475 (80.5)
White	194 (16.8)	228 (20.4)	214 (26.8)	255 (34.1)
Family income				
Less than $7,000	314 (68.7)	399 (102.3)	388 (88.1)	576 (157.8)
$7,000-11,999	259 (38.8)	369 (76.8)	249 (61.0)	368 (92.4)
$12,000-15,999	275 (50.3)	255 (49.5)	223 (55.8)	282 (69.8)
$16,000-19,999	314 (45.9)	377 (61.9)	354 (73.0)	504 (98.8)
$20,000-24,999	267 (41.0)	271 (46.5)	232 (56.1)	254 (56.2)
$25,000-37,999	262 (42.3)	313 (61.6)	271 (66.0)	322 (97.2)
$38,000 or more	89 (12.4)	110 (13.7)	139 (31.6)	177 (38.8)
Ability level				
Low	221 (38.9)	252 (60.4)	540 (255.9)	674 (285.2)
Middle low	185 (32.2)	204 (40.8)	147 (31.8)	181 (39.0)
Middle high	206 (28.1)	198 (30.1)	154 (30.3)	197 (41.8)
High	209 (19.2)	252 (26.1)	251 (36.5)	306 (47.2)

NOTE: Figures enclosed in parentheses are standard errors.

Table 12.--Average earnings of 1980 high school seniors who were enrolled in a 4-year public college or university, by selected student characteristics: Academic year 1980-81 to 1983-84

[In current dollars]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	$133 (8.0)	$151 (9.7)	$120 (11.4)	$143 (11.8)
Sex				
Male	130 (10.6)	138 (12.3)	106 (15.1)	122 (14.4)
Female	134 (10.3)	162 (13.2)	134 (15.4)	163 (17.0)
Race/ethnicity				
Hispanic	120 (13.9)	154 (17.2)	136 (31.1)	165 (38.4)
Asian	84 (14.3)	266 (106.3)	89 (40.0)	130 (31.8)
Black	245 (28.0)	250 (28.1)	205 (29.5)	269 (34.0)
White	118 (8.3)	134 (10.0)	112 (12.9)	130 (12.9)
Family income				
Less than $7,000	197 (37.7)	297 (69.3)	276 (83.3)	453 (123.5)
$7,000-11,999	226 (35.5)	285 (52.6)	340 (62.6)	218 (48.8)
$12,000-15,999	173 (26.6)	217 (33.6)	169 (41.0)	289 (64.9)
$16,000-19,999	159 (24.4)	201 (34.4)	220 (46.3)	185 (36.2)
$20,000-24,999	155 (21.5)	141 (17.9)	107 (20.1)	157 (26.0)
$25,000-37,999	120 (14.8)	118 (15.2)	44 (5.3)	88 (9.9)
$38,000 or more	65 (8.0)	82 (6.2)	50 (13.5)	55 (4.4)
Ability level				
Low	173 (21.0)	171 (24.9)	172 (49.7)	181 (35.7)
Middle low	143 (19.1)	236 (37.3)	177 (45.9)	188 (37.1)
Middle high	144 (16.6)	138 (15.9)	133 (22.9)	151 (24.1)
High	124 (11.0)	127 (9.8)	104 (14.5)	131 (14.3)

NOTE: Figures enclosed in parentheses are standard errors.

Table 13.--Average earnings of 1980 high school seniors who were enrolled in a 2-year public institution, by selected student characteristics: Summer 1980 and 1981, and academic years 1980-81 and 1981-82

[In current dollars]

Student characteristics	Summer		Academic year	
	1980	1981	1980-81	1981-82
Total	$ 629 (36.5)	$1,005 (54.1)	$ 112 (8.5)	$ 144 (11.8)
Sex				
Male	681 (54.2)	1,210 (93.2)	106 (12.9)	120 (16.1)
Female	582 (48.4)	809 (47.0)	118 (11.2)	166 (17.2)
Race/ethnicity				
Hispanic	669 (113.3)	907 (146.2)	126 (14.6)	159 (24.7)
Asian	354 (82.4)	688 (153.4)	117 (31.5)	184 (58.1)
Black	571 (56.1)	761 (71.9)	210 (36.4)	207 (28.7)
White	641 (43.8)	1,058 (65.3)	99 (9.3)	134 (14.3)
Family income				
Less than $7,000	439 (77.2)	704 (140.1)	151 (29.6)	191 (62.8)
$7,000-11,999	564 (115.3)	881 (169.6)	163 (32.6)	299 (68.8)
$12,000-15,999	641 (106.6)	1,008 (138.5)	137 (22.5)	150 (24.0)
$16,000-19,999	623 (82.9)	1,066 (181.9)	107 (16.1)	127 (17.4)
$20,000-24,999	718 (122.8)	1,060 (138.9)	97 (27.1)	113 (12.5)
$25,000-37,999	622 (77.7)	1,232 (136.0)	107 (22.0)	124 (30.0)
$38,000 or more	700 (138.4)	996 (136.7)	56 (5.9)	87 (6.6)
Ability level				
Low	462 (53.6)	795 (84.3)	134 (19.0)	165 (23.3)
Middle low	671 (87.2)	966 (88.4)	108 (15.3)	158 (26.1)
Middle high	585 (57.7)	1,122 (109.6)	91 (16.0)	144 (24.1)
High	796 (116.3)	1,132 (170.0)	116 (21.0)	116 (21.9)

NOTE: Figures enclosed in parentheses are standard errors.

Table 14.--Average earnings of 1980 high school seniors who were enrolled in other postsecondary education institutions, by selected student characteristics: Summer 1980 and academic year 1980-81

[In current dollars]

Student characteristics	Summer 1980	AY 1980-81
Total	$ 559 (53.4)	$ 98 (10.6)
Sex		
Male	746 (107.8)	82 (8.1)
Female	448 (56.2)	107 (16.1)
Race/ethnicity		
Hispanic	670 (158.1)	69 (16.1)
Black	346 (63.7)	74 (12.0)
White	590 (65.1)	104 (12.9)
Family income		
Less than $7,000	256 (72.9)	103 (25.1)
$7,000-11,999	581 (165.9)	193 (83.5)
$12,000-15,999	508 (109.8)	98 (25.8)
$16,000-19,999	529 (114.2)	138 (46.2)
$20,000-24,999	419 (84.5)	71 (13.6)
$25,000-37,999	470 (110.1)	108 (31.5)
$38,000 or more	851 (186.2)	66 (11.7)
Ability level		
Low	542 (98.1)	80 (11.5)
Middle low	537 (113.0)	107 (24.2)
Middle high	516 (79.7)	112 (25.8)
High	315 (70.6)	66 (10.3)

NOTE: Figures enclosed in parentheses are standard errors.

Academic year. The regression analyses show substantial differences for the academic years covered by the data. The pattern of regression coefficients essentially parallels the pattern found for the percentage of students employed. That is, an increase between the first and second years followed by decreases for subsequent years. Some of the largest differences are for the summer earnings of public 4-year college and university students (table 10). In the summer of 1980, the students in public 4-year institutions earned $792. The second-year students, (summer of 1981) earned substantially more--$1,121. The third-year students (summer of 1982) earned significantly less, $692, and student earnings in the summer of 1983 dropped even further, to $564. The pattern in the academic year earnings were not as clear.

Sex of student. The regression identifies differences in summer earnings between males and females. Generally, females earned less than males. For example, in the summer of 1981, male students in public 4-year schools (table 10) earned $1,365, and female students earned $903. This finding contrasts with the findings presented in chapter 1, which showed females were more likely to be employed. Subsequent chapters present findings about pay rates and hours worked.

Family income. Based on the regression coefficients, family income displays an erratic relationship to summer earnings. Generally, the highest income group (above $38,000) earned more than the lowest income group (less than $7,000). For example, in the summer of 1980, for students in public 4-year institutions (table 10), the lowest income students earned $467 and the highest income students earned $848.

Ability level. The regressions indicated that high ability students earned more than low ability students, especially during the summers. For example, in the summer of 1982, high ability students in 4-year public schools earned $753 and low ability students earned $396.

Chapter 3

How Many Different Jobs Did College Students Have?

For some college students, jobs may be easy to find; for others, it is more difficult. A measure of difficulty is the number of jobs students are able to find. If students are able to find two or more jobs, this implies they may not be facing a tight job market. On the other hand, students may move from job to job to improve earnings or working conditions. This chapter presents analyses of the number of jobs the HS&B seniors held during the summers and academic years. The number of jobs described in this chapter does not distinguish jobs held simultaneously or serially.

The regression of the number of jobs held by the HS&B seniors is shown in table 15. The number of summer jobs held by traditional college students was related to type of postsecondary institution, academic year, sex of the student, race/ethnicity, and ability level. The number of jobs worked during the academic year was related to type of postsecondary institution, academic year, sex of the student, race/ethnicity, family income, and ability level.

The percentage distribution of the number of jobs held by the HS&B seniors, by type of postsecondary institution and academic year, is shown in tables 16 through 21.

Type of postsecondary institution. The regressions indicate that students in private 4-year schools held more jobs than students in public 4-year schools (summer and academic year). However, the descriptive tables suggest that most of this difference is based on the percentage with no (zero) jobs. This is clear in a comparison of tables 23 and 24, where the major difference in distributions of the number of jobs held by students in public and private 4-year institutions is in the *None* column. This simply repeats the findings of chapter 1 and examination of the percent of students with three or more jobs rarely identified any meaningful differences.

Academic year. The regression coefficients for academic year also parallel the findings reported in chapter 1. There were also no new differences identified in the descriptive tables for type of institution.

Sex of student. Again, the regression coefficients for the comparison of males and females with jobs repeat the findings of chapter 1 --that is, females had more jobs than males. However, examination of the descriptive tables identified a few meaningful differences in the distribution of the number of jobs. For example, during academic year 1980-81, 4 percent of males had three or more jobs while 8 percent of females had three or more jobs.

Table 15.--Regression parameters for the number of jobs held by the 1980 high school seniors during the summers before and during the academic year they attended college

Variable	df	Summer parameter estimate	During AY parameter estimate
Intercept	1	0.61	0.90
Type of institution			
Private 4-year		0.10	0.12
Public 2-year		-0.01	0.06
Other school		-0.05	-0.02
R^2 without		0.1110	0.0816
F-test	3	13.42*	12.17*
Academic year			
1981-82		0.40	0.30
1982-83		-0.21	-0.43
1983-84		-0.28	-0.14
R^2 without		0.0149	0.0191
F-test	3	416.42*	265.80*
Sex			
Female		0.06	0.11
R^2 without		0.1127	0.0814
F-test	1	18.87*	38.96*
Race/ethnicity			
Black		-0.09	-0.14
Hispanic		-0.02	-0.01
Asian		-0.08	-0.08
American Indian		0.16	-0.06
R^2 without		0.1127	0.0828
F-test	4	4.72*	5.48*
Family income			
Less than $7,000		-0.03	-0.09
$7,000-$11,999		.00	0.05
$12,000-$15,999		.00	0.03
$20,000-$24,999		0.01	.00
$25,000-$37,999		0.01	-0.03
$38,000 or more		-0.01	-0.12
R^2 without		0.1140	0.0809
F-test	6	0.42	7.51*
Ability level			
Low		-0.07	-0.06
Middle low		-0.06	-0.03
High		0.08	0.05
R^2 without		0.1097	0.0833
F-test	3	18.87*	5.28**
R^2	11623	0.1142	0.0846

* denotes p<.001.

** denotes p<.005.

Table 16.--Number of jobs held by 1980 high school seniors enrolled in private colleges and universities, by selected student characteristics: Academic year 1980-81

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	35.0 (2.13)	43.1 (2.07)	15.6 (1.54)	6.2 (1.07)
Sex				
Male	32.3 (3.11)	49.5 (3.27)	14.4 (2.12)	3.8 (1.10)
Female	37.5 (3.11)	37.4 (2.87)	16.7 (2.10)	8.4 (1.76)
Race/ethnicity				
Hispanic	37.5 (7.73)	40.1 (6.77)	18.2 (7.34)	4.2 (1.92)
Asian	32.3 (13.99)	49.2 (11.89)	18.0 (7.66)	0.4 (0.45)
Black	29.0 (3.75)	48.4 (4.99)	16.7 (3.80)	5.9 (3.48)
White	35.7 (2.45)	42.5 (2.34)	15.3 (1.70)	6.5 (1.18)
Family income				
Less than $7,000	33.1 (8.59)	39.5 (8.34)	24.5 (8.55)	3.0 (1.69)
$7,000-11,999	19.5 (5.20)	57.8 (7.07)	15.8 (5.54)	6.9 (4.41)
$12,000-15,999	32.4 (6.20)	48.2 (6.66)	16.5 (4.94)	2.9 (1.15)
$16,000-19,999	28.5 (6.07)	41.8 (6.30)	15.8 (4.70)	13.9 (4.55)
$20,000-24,999	30.2 (4.70)	42.8 (4.96)	17.6 (3.87)	9.4 (3.04)
$25,000-37,999	39.0 (5.26)	39.4 (5.29)	15.5 (3.59)	6.1 (2.52)
$38,000 or more	40.5 (4.47)	40.0 (3.96)	15.6 (2.92)	3.8 (1.45)
Ability level				
Low	33.8 (6.92)	47.8 (7.85)	16.3 (6.15)	2.1 (1.30)
Middle low	49.0 (6.45)	38.6 (5.93)	9.7 (3.21)	2.7 (2.12)
Middle high	35.6 (4.33)	43.7 (4.50)	14.8 (3.18)	5.9 (2.15)
High	30.1 (2.78)	42.9 (2.86)	18.7 (2.40)	8.2 (1.61)

NOTE: Figures enclosed in parentheses are standard errors.

Table 17.--Number of jobs held by 1980 high school seniors enrolled in public colleges and universities, by selected student characteristics: Academic year 1980-81

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	36.0 (1.49)	41.6 (1.50)	16.3 (1.12)	6.1 (0.78)
Sex				
Male	36.7 (2.22)	40.0 (2.23)	16.5 (1.68)	6.8 (1.24)
Female	35.4 (1.97)	43.0 (2.03)	16.2 (1.53)	5.5 (0.90)
Race/ethnicity				
Hispanic	32.2 (3.86)	41.5 (4.72)	20.9 (5.37)	5.4 (1.80)
Asian	37.7 (6.76)	44.5 (7.77)	16.6 (3.90)	1.2 (0.85)
Black	41.5 (3.08)	47.7 (3.16)	8.5 (1.37)	2.3 (0.63)
White	35.4 (1.75)	40.4 (1.72)	17.5 (1.33)	6.7 (0.94)
Family income				
Less than $7,000	49.3 (5.73)	38.1 (5.69)	5.2 (1.58)	7.3 (3.37)
$7,000-11,999	30.8 (4.63)	39.3 (4.56)	24.0 (4.78)	5.9 (2.43)
$12,000-15,999	34.9 (4.50)	45.4 (4.58)	12.9 (2.75)	6.8 (2.75)
$16,000-19,999	34.1 (4.14)	39.6 (4.25)	19.7 (3.52)	6.5 (2.18)
$20,000-24,999	31.1 (3.70)	46.7 (3.84)	15.6 (2.77)	6.6 (1.88)
$25,000-37,999	29.1 (3.12)	44.0 (3.48)	23.7 (3.20)	3.2 (1.16)
$38,000 or more	43.2 (3.78)	36.9 (3.46)	14.9 (2.50)	5.0 (1.54)
Ability level				
Low	35.7 (4.15)	41.0 (4.12)	19.3 (4.47)	4.0 (2.07)
Middle low	36.6 (3.30)	42.7 (3.42)	14.5 (2.71)	6.1 (1.72)
Middle high	37.9 (3.03)	40.0 (2.99)	18.0 (2.34)	4.1 (1.22)
High	34.9 (2.36)	39.7 (2.31)	18.7 (2.07)	6.8 (1.26)

NOTE: Figures enclosed in parentheses are standard errors.

Table 18.--Number of jobs held by 1980 high school seniors enrolled in public 2-year institutions, by selected student characteristics: Academic year 1980-81

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	35.8 (1.85)	38.3 (1.86)	18.9 (1.58)	6.9 (1.00)
Sex				
Male	39.8 (2.79)	35.0 (2.57)	19.9 (2.26)	5.3 (1.27)
Female	32.3 (2.32)	41.3 (2.49)	18.1 (2.02)	8.3 (1.51)
Race/ethnicity				
Hispanic	31.4 (5.55)	44.1 (6.17)	15.1 (3.28)	9.4 (3.76)
Asian	54.6 (7.28)	32.8 (7.41)	10.5 (3.01)	2.1 (1.48)
Black	34.7 (3.68)	46.8 (3.98)	15.5 (3.45)	3.0 (1.03)
White	35.6 (2.14)	36.8 (2.20)	20.2 (1.86)	7.4 (1.21)
Family income				
Less than $7,000	37.8 (6.98)	47.6 (7.31)	11.6 (4.54)	3.0 (1.39)
$7,000-11,999	38.6 (5.26)	36.2 (5.06)	18.9 (4.52)	6.3 (2.63)
$12,000-15,999	31.1 (4.74)	40.4 (4.92)	22.5 (4.38)	6.0 (2.46)
$16,000-19,999	29.2 (4.45)	38.0 (4.77)	24.9 (4.46)	8.0 (2.75)
$20,000-24,999	42.6 (4.62)	38.0 (4.75)	12.0 (2.85)	7.4 (2.95)
$25,000-37,999	34.4 (4.18)	43.7 (4.32)	16.3 (3.35)	5.6 (2.13)
$38,000 or more	44.0 (5.58)	34.3 (5.21)	17.1 (4.07)	4.6 (2.21)
Ability level				
Low	40.1 (4.02)	43.0 (4.10)	13.8 (2.84)	3.1 (1.25)
Middle low	35.7 (3.60)	42.7 (3.76)	15.1 (2.58)	6.5 (1.82)
Middle high	36.4 (3.63)	33.8 (3.51)	22.8 (3.14)	6.9 (2.07)
High	33.9 (4.18)	35.2 (4.22)	24.0 (3.70)	6.9 (2.20)

NOTE: Figures enclosed in parentheses are standard errors.

Table 19.--Number of jobs held by 1980 high school seniors enrolled in other postsecondary institutions, by selected student characteristics: Academic year 1980-81

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	36.3 (2.98)	42.3 (3.32)	16.8 (2.46)	4.5 (1.22)
Sex				
Male	28.9 (4.72)	48.7 (5.43)	17.2 (4.29)	5.2 (2.18)
Female	40.6 (3.81)	38.6 (4.05)	16.6 (.97)	4.2 (1.46)
Race/ethnicity				
Hispanic	43.5 (11.33)	45.4 (12.79)	3.6 (2.17)	7.5 (3.50)
Asian	n<30	n<30	n<30	n<30
Black	52.2 (5.82)	33.4 (5.14)	12.7 (3.24)	1.7 (0.95)
White	32.6 (3.43)	44.0 (3.91)	18.4 (2.98)	4.9 (1.49)
Family income				
Less than $7,000	40.2 (8.90)	46.0 (9.24)	10.1 (4.97)	3.7 (2.68)
$7,000-11,999	36.0 (9.82)	60.1 (10.01)	2.4 (1.68)	1.5 (1.53)
$12,000-15,999	29.8 (7.49)	50.7 (8.66)	10.9 (5.03)	8.7 (4.96)
$16,000-19,999	35.2 (8.09)	32.9 (7.82)	27.2 (7.69)	4.6 (4.23)
$20,000-24,999	42.9 (7.52)	32.2 (7.58)	15.6 (5.57)	9.2 (4.33)
$25,000-37,999	40.1 (7.22)	35.4 (7.17)	19.9 (6.23)	4.5 (2.81)
$38,000 or more	38.6 (8.87)	45.2 (9.15)	14.6 (6.94)	1.5 (1.07)
Ability level				
Low	41.4 (6.04)	39.2 (5.88)	15.2 (4.61)	4.2 (2.61)
Middle low	34.5 (5.87)	48.3 (6.44)	16.1 (4.46)	1.1 (0.66)
Middle high	41.4 (5.98)	32.0 (5.89)	17.4 (4.68)	9.1 (3.49)
High	38.6 (8.38)	40.8 (9.04)	11.1 (4.86)	9.4 (4.77)

NOTE: Figures enclosed in parentheses are standard errors.

Table 20.--Number of jobs held by 1980 high school seniors enrolled in private 4-year colleges and universities, by selected student characteristics: Academic year 1981-82

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	24.4 (2.17)	43.7 (2.30)	20.8 (1.86)	11.1 (1.52)
Sex				
Male	26.9 (3.21)	44.0 (3.48)	19.8 (2.68)	9.3 (2.02)
Female	22.2 (2.83)	43.5 (3.13)	21.7 (2.52)	12.7 (2.09)
Race/ethnicity				
Hispanic	11.9 (4.48)	50.7 (7.58)	30.5 (7.33)	7.0 (2.71)
Asian	18.1 (6.76)	59.4 (10.85)	14.6 (6.14)	7.9 (4.54)
Black	19.7 (3.26)	58.0 (4.97)	17.5 (3.15)	4.8 (1.53)
White	25.3 (2.50)	41.6 (2.61)	21.1 (2.10)	12.0 (1.72)
Family income				
Less than $7,000	17.3 (5.70)	65.4 (8.38)	16.2 (5.55)	1.0 (0.78)
$7,000-11,999	21.2 (6.82)	51.2 (8.00)	19.8 (6.01)	7.7 (4.58)
$12,000-15,999	21.2 (6.94)	47.0 (8.08)	16.2 (5.82)	15.6 (5.92)
$16,000-19,999	17.0 (5.45)	41.7 (7.12)	30.5 (6.80)	10.9 (4.62)
$20,000-24,999	13.3 (4.55)	38.8 (5.70)	33.1 (5.81)	14.8 (4.24)
$25,000-37,999	25.7 (4.92)	46.4 (5.61)	14.2 (3.64)	13.8 (4.27)
$38,000 or more	31.7 (4.49)	37.4 (4.97)	20.2 (3.84)	10.7 (2.97)
Ability level				
Low	17.6 (5.36)	50.2 (9.51)	23.7 (9.17)	8.5 (6.85)
Middle low	24.7 (5.99)	52.8 (7.02)	14.6 (4.21)	7.9 (3.84)
Middle high	22.7 (4.34)	45.1 (5.32)	23.4 (4.41)	8.8 (2.84)
High	20.3 (2.62)	39.9 (3.12)	24.3 (3.02)	15.5 (2.49)

NOTE: Figures enclosed in parentheses are standard errors.

Table 21.--Number of jobs held by 1980 high school seniors enrolled in public 4-year colleges and universities, by selected student characteristics: Academic year 1981-82

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	25.6 (1.61)	42.0 (1.63)	22.4 (1.50)	10.1 (1.02)
Sex				
Male	24.5 (2.16)	46.8 (2.52)	20.6 (2.15)	8.0 (1.33)
Female	26.5 (2.22)	37.8 (2.22)	23.9 (1.96)	11.8 (1.49)
Race/ethnicity				
Hispanic	24.7 (4.11)	52.3 (5.77)	15.9 (3.23)	7.0 (2.31)
Asian	14.9 (3.90)	57.0 (7.69)	22.9 (7.51)	5.1 (2.85)
Black	37.0 (3.56)	37.6 (3.12)	19.8 (3.20)	5.6 (2.10)
White	24.2 (1.87)	42.0 (1.90)	22.8 (1.70)	11.0 (1.20)
Family income				
Less than $7,000	37.8 (6.74)	36.8 (6.38)	17.8 (5.00)	7.6 (4.11)
$7,000-11,999	20.4 (4.26)	42.6 (5.40)	25.3 (4.98)	11.6 (4.03)
$12,000-15,999	26.8 (4.65)	39.5 (5.23)	25.3 (5.05)	8.4 (3.30)
$16,000-19,999	29.4 (4.54)	43.7 (5.09)	19.7 (4.07)	7.3 (2.28)
$20,000-24,999	23.2 (3.62)	42.9 (4.37)	21.6 (3.57)	12.3 (2.73)
$25,000-37,999	20.8 (2.98)	42.8 (3.63)	23.1 (3.32)	13.3 (2.66)
$38,000 or more	27.3 (3.63)	41.6 (3.71)	21.4 (3.30)	9.8 (2.21)
Ability level				
Low	34.4 (4.68)	42.7 (5.29)	15.4 (4.15)	7.5 (3.50)
Middle low	22.7 (3.15)	39.3 (3.75)	30.4 (3.83)	7.6 (2.39)
Middle high	24.9 (2.97)	49.4 (3.30)	17.0 (2.64)	8.7 (1.87)
High	25.2 (2.37)	39.9 (2.54)	22.0 (2.14)	13.0 (1.70)

NOTE: Figures enclosed in parentheses are standard errors.

Table 22.--Number of jobs held by 1980 high school seniors enrolled in public 2-year institutions, by selected student characteristics: Academic year 1981-82

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	18.4 (1.79)	48.7 (2.25)	21.7 (1.87)	11.3 (1.58)
Sex				
Male	23.1 (2.86)	46.8 (3.22)	17.1 (2.51)	13.0 (2.55)
Female	13.9 (2.05)	50.4 (3.15)	26.0 (2.77)	9.7 (1.90)
Race/ethnicity				
Hispanic	26.1 (6.53)	42.8 (6.31)	13.9 (2.85)	17.1 (5.85)
Asian	13.8 (4.04)	63.6 (6.74)	14.0 (6.07)	8.6 (3.43)
Black	27.0 (4.92)	45.8 (5.19)	19.9 (4.87)	7.3 (3.11)
White	17.0 (2.08)	48.9 (2.72)	23.3 (2.29)	10.9 (1.81)
Family income				
Less than $7,000	35.6 (9.77)	45.0 (9.53)	6.6 (3.38)	12.8 (6.79)
$7,000-11,999	14.4 (3.77)	52.6 (6.35)	25.2 (5.84)	7.9 (4.21)
$12,000-15,999	19.3 (5.08)	51.3 (6.47)	16.5 (4.17)	12.8 (4.58)
$16,000-19,999	14.6 (4.19)	47.0 (6.16)	30.7 (5.68)	7.7 (2.79)
$20,000-24,999	17.4 (4.60)	51.7 (6.02)	18.9 (5.08)	11.9 (4.22)
$25,000-37,999	19.5 (4.10)	50.9 (4.95)	18.5 (3.71)	11.1 (3.33)
$38,000 or more	15.1 (4.99)	50.6 (6.84)	25.0 (5.95)	9.2 (3.95)
Ability level				
Low	23.8 (4.43)	46.5 (5.37)	14.1 (3.13)	15.7 (4.67)
Middle low	18.9 (3.47)	50.8 (4.37)	21.5 (3.79)	8.8 (2.68)
Middle high	17.2 (3.32)	50.9 (4.34)	22.8 (3.71)	9.1 (2.33)
High	21.5 (4.26)	44.7 (5.30)	24.3 (4.48)	9.4 (3.04)

NOTE: Figures enclosed in parentheses are standard errors.

Table 23.--Number of jobs held by 1980 high school seniors enrolled in private 4-year colleges and universities, by selected student characteristics: Academic year 1982-83

[In percent]

Student characteristics	Number of jobs							
	None		One		Two		Three or more	
Total	46.9	(2.70)	42.4	(2.70)	8.9	(1.39)	1.8	(0.67)
Sex								
Male	49.8	(4.02)	40.8	(3.75)	7.1	(1.88)	2.3	(1.13)
Female	44.2	(3.32)	44.0	(3.48)	10.5	(1.96)	1.4	(0.78)
Race/ethnicity								
Hispanic	68.0	(8.85)	27.4	(8.17)	4.1	(3.00)	0.4	(0.43)
Asian	38.9	(8.85)	61.1	(8.85)	0	(0)	0	(0)
Black	55.4	(6.05)	40.8	(5.75)	3.8	(1.52)	0	(0.02)
White	45.5	(3.06)	42.6	(3.06)	9.9	(1.60)	2.1	(0.79)
Family income								
Less than $7,000	21.7	(7.88)	72.8	(8.89)	5.6	(3.79)	0	(0)
$7,000-11,999	57.5	(9.18)	27.8	(6.91)	14.7	(7.41)	0	(0)
$12,000-15,999	51.1	(9.48)	39.5	(9.26)	8.1	(5.18)	1.2	(1.23)
$16,000-19,999	30.2	(7.43)	59.7	(7.96)	8.7	(5.05)	1.4	(1.00)
$20,000-24,999	37.9	(6.42)	49.6	(6.61)	12.4	(4.33)	0	(0)
$25,000-37,999	48.3	(6.21)	42.8	(6.29)	4.7	(2.85)	4.2	(2.48)
$38,000 or more	45.9	(4.88)	37.8	(4.47)	13.0	(3.27)	3.4	(1.86)
Ability level								
Low	41.0	(11.39)	58.3	(11.42)	0.7	(0.74)	0	(0)
Middle low	62.2	(7.17)	30.3	(6.49)	7.5	(4.66)	0	(0)
Middle high	46.9	(5.81)	42.2	(5.67)	9.0	(3.39)	2.0	(1.63)
High	38.7	(3.45)	46.8	(3.69)	12.7	(2.35)	1.8	(0.90)

NOTE: Figures enclosed in parentheses are standard errors.

Table 24.--Number of jobs held by 1980 high school seniors enrolled in public 4-year colleges and universities, by selected student characteristics: Academic year 1982-83

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	64.3 (1.72)	28.8 (1.56)	6.1 (0.89)	0.8 (0.33)
Sex				
Male	67.6 (2.40)	27.3 (2.15)	4.7 (1.10)	0.4 (0.32)
Female	61.1 (2.43)	30.1 (2.24)	7.5 (1.40)	1.3 (0.56)
Race/ethnicity				
Hispanic	65.9 (5.59)	26.0 (4.27)	7.5 (5.00)	0.5 (0.37)
Asian	66.0 (8.58)	28.2 (9.04)	5.0 (2.00)	0.7 (0.70)
Black	60.0 (3.78)	36.3 (3.80)	3.5 (1.03)	0.3 (0.30)
White	64.6 (1.92)	28.3 (1.79)	6.1 (1.02)	0.9 (0.39)
Family income				
Less than $7,000	58.5 (7.75)	34.8 (7.26)	6.0 (4.70)	0.8 (0.77)
$7,000-11,999	47.2 (5.80)	45.7 (5.83)	4.7 (2.68)	2.4 (1.91)
$12,000-15,999	61.5 (5.82)	30.9 (5.37)	7.6 (3.57)	0 (0)
$16,000-19,999	63.1 (4.96)	34.8 (4.94)	2.0 (.75)	0.1 (0.08)
$20,000-24,999	59.5 (4.44)	28.5 (3.87)	10.0 (2.76)	2.0 (1.40)
$25,000-37,999	63.8 (4.03)	26.9 (3.74)	9.3 (2.38)	0 (0)
$38,000 or more	71.2 (3.35)	22.6 (3.16)	4.3 (1.51)	1.9 (1.16)
Ability level				
Low	73.8 (5.47)	21.5 (4.89)	1.2 (.70)	3.4 (3.00)
Middle low	63.6 (4.55)	31.5 (4.18)	5.0 (1.96)	0 (0)
Middle high	60.7 (3.68)	30.8 (3.34)	6.9 (1.91)	1.6 (0.94)
High	64.6 (2.58)	27.9 (2.37)	7.0 (1.37)	0.5 (0.34)

NOTE: Figures enclosed in parentheses are standard errors.

Table 25.--Number of jobs held by 1980 high school seniors enrolled in private 4-year colleges and universities, by selected student characteristics: Academic year 1983-84

[In percent]

Student characteristics	Number of jobs			
	None	One	Two	Three or more
Total	33.0 (2.57)	51.3 (2.66)	13.2 (1.93)	2.6 (0.84)
Sex				
Male	37.1 (4.22)	50.9 (4.17)	11.0 (2.68)	1.1 (0.70)
Female	28.9 (3.38)	51.7 (3.67)	15.3 (2.80)	4.0 (1.51)
Race/ethnicity				
Hispanic	22.5 (7.03)	66.1 (9.89)	3.6 (2.41)	7.8 (5.39)
Asian	31.8 (9.97)	59.3 (9.91)	9.0 (5.11)	0 (0)
Black	22.6 (4.36)	71.7 (5.39)	4.3 (2.08)	1.4 (0.86)
White	34.5 (2.85)	48.4 (2.91)	14.5 (2.20)	2.6 (0.96)
Family income				
Less than $7,000	27.1 (14.29)	72.9 (14.29)	0 (0)	0 (0)
$7,000-11,999	38.3 (10.48)	58.3 (10.43)	3.4 (2.35)	0 (0)
$12,000-15,999	14.0 (6.61)	58.7 (10.42)	18.1 (8.70)	9.1 (6.22)
$16,000-19,999	20.2 (6.91)	57.8 (8.66)	21.0 (7.44)	0.9 (0.84)
$20,000-24,999	29.2 (7.01)	52.7 (7.20)	17.3 (5.53)	0.8 (0.51)
$25,000-37,999	39.3 (6.10)	50.1 (6.42)	7.0 (3.07)	3.6 (2.39)
$38,000 or more	44.1 (4.38)	40.8 (4.66)	11.7 (3.27)	3.4 (1.90)
Ability level				
Low	25.9 (12.41)	68.3 (12.54)	5.8 (3.66)	0 (0)
Middle low	45.6 (8.42)	37.7 (7.79)	16.6 (6.37)	0.1 (0.10)
Middle high	34.9 (5.90)	49.5 (6.07)	13.8 (4.59)	1.8 (1.75)
High	31.3 (3.62)	49.7 (3.85)	14.4 (2.69)	4.6 (1.69)

NOTE: Figures enclosed in parentheses are standard errors.

Table 26.--Number of jobs held by 1980 high school seniors enrolled in public 4-year colleges and universities, by selected student characteristics: Academic year 1983-84

[In percent]

Student characteristics	Number of jobs held			
	None	One	Two	Three or more
Total	36.1 (1.82)	51.0 (1.93)	11.0 (1.18)	1.9 (0.51)
Sex				
Male	38.4 (2.78)	49.6 (2.82)	10.6 (1.75)	1.5 (0.69)
Female	34.1 (2.54)	52.2 (2.68)	11.4 (1.61)	2.4 (0.74)
Race/ethnicity				
Hispanic	35.8 (6.27)	56.5 (6.69)	6.2 (2.09)	1.4 (0.86)
Asian	36.0 (7.66)	45.6 (7.41)	17.1 (4.31)	1.3 (1.13)
Black	39.1 (4.21)	51.1 (4.21)	8.9 (2.53)	0.8 (0.57)
White	36.0 (2.06)	50.9 (2.24)	11.2 (1.38)	1.8 (0.55)
Family income				
Less than $7,000	25.5 (6.25)	67.9 (7.17)	5.4 (3.03)	1.2 (1.18)
$7,000-11,999	30.9 (5.58)	54.4 (6.22)	13.5 (4.39)	1.2 (0.66)
$12,000-15,999	31.5 (6.02)	53.4 (6.54)	8.8 (3.75)	6.3 (3.69)
$16,000-19,999	32.0 (5.06)	53.9 (5.33)	13.0 (3.71)	1.1 (0.52)
$20,000-24,999	40.0 (4.53)	51.6 (4.63)	8.2 (2.47)	0.2 (0.24)
$25,000-37,999	32.5 (4.04)	46.4 (4.27)	18.4 (3.41)	2.7 (1.54)
$38,000 or more	42.9 (3.97)	43.6 (4.15)	10.4 (2.45)	3.2 (1.63)
Ability level				
Low	37.9 (6.83)	55.4 (7.04)	5.7 (1.90)	1.1 (0.85)
Middle low	30.3 (4.25)	57.3 (4.97)	9.1 (3.09)	3.3 (1.96)
Middle high	35.5 (3.69)	52.7 (3.87)	10.4 (2.22)	1.4 (0.81)
High	37.9 (2.57)	47.6 (2.77)	13.1 (1.84)	1.3 (0.61)

NOTE: Figures enclosed in parentheses are standard errors.

Race/ethnicity. The regressions for number of jobs found race/ethnic differences repeat the findings of chapter 1. That is, most of the variation appeared to be in the *None* column, not in the remainder of the distribution. This phenomena also was the same for family income during the academic year.

Ability level. Again, the regression coefficients for ability mirror the findings in chapter 1. However, the descriptive tables identified some distributional differences other than the not working/working variation described in chapter 1. For example, 8 percent of high ability and 2 percent of low ability students in private 4-year colleges held three or more jobs during academic year 1980-81.

The findings of this chapter closely parallel the findings of chapter 1. This is not surprising, because the dependent variables for both chapters are so closely related. Indeed, the zero jobs columns in the descriptive tables in this chapter are essentially the complement of the percentage of students employed shown in the tables of chapter 1. However, this chapter provides some interesting information about sex and ability level differences.

In terms of the total distribution of jobs, it is interesting to note that about two-thirds of the employed students have only one job (table 16, 43 percent divided by (100-35 percent) equals 66 percent).

Chapter 4

What Kinds of Jobs Did College Students Have?

The types of jobs held by college students are typically service jobs, such as restocking library shelves or waiting tables. However, the most useful jobs for college students may be those that are related to their field of study. Some students participate in cooperative education programs, where they work as junior staff in the types of jobs they are likely to hold after they get a degree.

To analyze the occupations held by college students, it was necessary to use the job as the unit of analysis, rather than the student. By this approach, if a student held three jobs, then the sample size for analysis increased by two (three jobs, rather than one student). Pooling over the 4 summers and 4 academic years covered by the HS&B data, the number of analysis observations increased by a factor greater than eight. Hence, while the text in this chapter (and chapters 5 and 6) may read as if the focus is students, the proper unit is student jobs.

The HS&B categorization of occupations was a very detailed code ranging from 001 to 995. These codes were grouped into 19 categories for the following analyses (Appendix C). While these categories displayed substantial diversity, it is always true that any consolidation loses some detail.

Since the topic of interest in this chapter is the type of occupation held by the students in each of their jobs, the multivariate approach used in prior chapters had to be modified slightly. As stated above, type of occupation was a 19-category variable that had a nominal scale. This variable did not lend itself to regression analysis, which is appropriate for continuous variables (or with slight misuse for dichotomous variables). Rather than shift to a different technique, the regression analysis shifted to a subset of the occupation categories. That is, only three of the most frequently occurring occupations (technical/professional, sales/office worker, and food service worker) were dichotomously regressed using a model similar to that used in the prior chapters. These categories represent major types of occupations.

Rather than the typical interpretation of the regression parameters (table 27), this analysis focuses on the pattern of findings for all three occupations. The pattern is important because these three variables represent one global variable. Identifying a pattern requires clarity, and the pattern for several variables was not clear. Type of postsecondary institution was related to the percentage of students in technical/professional jobs; however, for the other two job types, the regression failed to find a relationship. The majority of this relationship appears to be attributable to differences in private and public 4-year college students' jobs. Although the pattern is not consistent across the three job types, it is reasonable to expect students in private 4-year colleges to have greater access to technical/professional jobs.

Table 27.--Regression parameters for percent of jobs in three selected occupations

Variable	df	Professional parameter estimate	Sales parameter estimate	Food parameter estimate
INTERCEPT	1	5.92	6.28	16.11
Type of institution				
Private 4-year		3.10	-1.13	-0.91
Public 2-year		-0.74	1.19	-2.85
Other		1.42	1.46	-4.02
R^2 without		0.0411	0.0157	0.0180
F-test	3	6.45*	1.99	2.86
Timing				
Summer		-0.54	-0.58	0.61
R^2 without		0.0433	0.0163	0.0189
F-test	1	0.00	0.85	0.86
Academic year				
1981-82		0.98	0.62	-2.21
1982-83		7.17	4.08	-2.90
1983-84		14.17	4.11	-4.96
R^2 without		0.0197	0.0135	0.0172
F-test	3	69.14*	8.26*	5.14**
Sex				
Female		-1.44	4.62	7.71
R^2 without		0.0428	0.0108	0.0083
F-test	1	4.39	47.88*	91.72*
Race/ethnicity				
Hispanic		2.29	8.63	-6.63
American Indian		11.14	-0.52	0.35
Asian		10.32	-0.11	-3.82
Black		-0.13	7.37	-7.17
R^2 without		0.0399	0.0102	0.0154
F-test	4	7.47*	13.25*	7.71*
Family income				
Less than $7,000		-1.85	-2.38	-4.77
$7,000-11,999		-1.67	-0.67	2.00
$12,000-15,999		1.82	-1.59	2.65
$20,000-24,999		1.43	-2.59	0.30
$25,000-37,999		3.11	-0.18	-1.72
$38,000 or more		0.06	0.03	1.66
R^2 without		0.0413	0.0153	0.0172
F-test	6	2.93***	1.57	2.57
Ability level				
Low		-3.50	-4.15	-0.79
Middle low		-2.80	-1.04	-1.33
High		0.94	1.83	1.13
R^2 without		0.0415	0.0143	0.0188
F-test	3	5.27**	5.98*	0.57
R^2	67272	0.0433	0.0164	0.0190

* denotes p<.001.

** denotes p<.005.

*** denotes p<.01.

NOTE: The repeated measure nature of the data required the degrees of freedom used for F-tests to be 8,409.

The timing variable (summer versus academic year) failed to show any relationship for any of the three jobs. This pattern is clear, but unexpected. It may be that the job categories used in this analysis were too broad to capture this variation.

Academic year of the job was consistently related to the percent of students holding technical/professional, sales/office worker, and food service worker jobs. Furthermore, the parameters are reasonable. That is, fourth-year students are more likely to hold technical/professional jobs than are first-year students.

The variable of sex did not display a clear relationship. For sales/office worker and food service worker, a relationship was found. For technical/professional jobs, no difference was identified.

Race/ethnicity displayed a consistent pattern. It was related to technical/professional, sales/office worker, and food service worker jobs.

Family income did not display a clear pattern. For technical/professional jobs, family income was related, but not for the other two job categories.

Finally, ability level also did not display a consistent pattern. Ability level was related to technical/professional and sales/office worker jobs. No relationship was found for food service worker jobs.

In summary, the regression analysis found a clear pattern for year and race/ethnicity. A clear lack of relationship was found for summer versus academic year jobs. The other predictors in the model displayed an inconsistent pattern. Findings for all of the predictor variables are shown in tables 28 through 35.

Type of postsecondary institution. The different occupations held by students in private and public 4-year colleges and universities in the summer of 1982 are displayed in table 28. As the regression indicated, students in private 4-year institutions were more likely to hold technical/professional jobs than students in public 4-year institutions.

Academic year. The differences in the occupational distributions for summer jobs, by academic year, are shown in table 29. Table 30 displays similar estimates for jobs held during the academic year. Both tables illustrate the regression finding that as students progress they are more likely to hold technical/professional jobs. The largest shift was between the second and third years. Specifically, in the summer of 1981, 8 percent of students held technical/professional jobs. In the summer of 1982, 21 percent held technical/professional jobs. There was also an increase in the percentage of students holding sales/office jobs in the summers of 1981 and 1982.

Table 28.--Percentage distribution according to type of occupation held by 1980 high school seniors, by postsecondary education institution attended: Summer 1982

Occupation	Type of institution	
	Private 4-year	Public 4-year
Total	100.0	100.0
Technical/professional	25.0 (3.13)	17.6 (2.11)
Sales clerk	4.9 (1.20)	5.6 (1.02)
Bookkeeper	1.0 (0.48)	1.4 (0.57)
Cashier	1.1 (0.58)	4.1 (1.04)
Receptionist	0.6 (0.41)	1.8 (0.59)
Secretary	3.8 (1.31)	5.5 (1.23)
Clerk	3.6 (1.00)	3.4 (0.83)
Sales/office worker	14.0 (2.38)	13.5 (1.83)
Craftsman	4.6 (1.68)	4.3 (1.23)
Construction worker	2.7 (1.20)	2.5 (0.90)
Stockworker	0.5 (0.22)	1.2 (0.42)
Operative	9.9 (1.92)	9.4 (1.45)
Laborer	1.9 (0.83)	1.1 (0.45)
Farmer	0.4 (0.30)	1.4 (0.58)
Cleaning service worker	3.0 (1.10)	2.0 (0.64)
Food service worker	12.8 (2.27)	16.5 (2.13)
Medical worker	3.2 (1.16)	2.0 (0.62)
Recreation attendant	3.0 (1.21)	3.5 (0.92)
Personal/ protective service worker	4.0 (1.32)	3.1 (0.96)

NOTE: Figures enclosed in parentheses are standard errors. Details may not add to totals due to rounding.

Table 29.--Percentage distribution, by type of occupation held by 1980 high school seniors: Summer 1980-83

Occupation	Summer of 1980	1981	1982	1983
Total	100.0	100.0	100.0	100.0
Technical/ professional	5.2 (0.62)	7.5 (0.61)	20.5 (1.85)	25.9 (2.08)
Sales clerk	9.6 (0.78)	9.0 (0.76)	5.4 (0.77)	4.3 (0.99)
Bookkeeper	0.6 (0.19)	1.4 (0.28)	1.2 (0.40)	1.5 (0.57)
Cashier	6.3 (0.64)	5.7 (0.59)	2.9 (0.68)	2.1 (0.58)
Receptionist	2.1 (0.40)	2.0 (0.38)	1.4 (0.39)	1.2 (0.55)
Secretary	3.6 (0.46)	3.5 (0.40)	4.8 (0.91)	3.5 (0.83)
Clerk	5.6 (0.67)	5.6 (0.58)	3.5 (0.64)	3.6 (0.89)
Sales/office worker	9.1 (0.77)	9.1 (0.71)	13.7 (1.48)	14.2 (1.68)
Craftsman	4.9 (0.56)	5.6 (0.63)	4.4 (1.01)	4.1 (1.16)
Construction worker	1.6 (0.34)	1.3 (0.28)	2.6 (0.72)	1.6 (0.73)
Stockworker	3.4 (0.48)	2.6 (0.44)	0.9 (0.27)	1.0 (0.46)
Operative	10.5 (0.82)	11.2 (0.78)	9.6 (1.22)	9.3 (1.49)
Laborer	2.6 (0.44)	3.0 (0.41)	1.4 (0.42)	2.8 (0.88)
Farmer	2.5 (0.43)	1.3 (0.28)	1.0 (0.37)	0.6 (0.35)
Cleaning service worker	3.8 (0.50)	4.3 (0.53)	2.4 (0.58)	2.6 (0.82)
Food service worker	18.8 (1.08)	15.0 (0.92)	15.1 (1.59)	14.2 (1.59)
Medical worker	2.6 (0.41)	2.7 (0.39)	2.5 (0.57)	1.4 (0.55)
Recreation attendant	4.4 (0.57)	4.0 (0.53)	3.3 (0.73)	3.3 (1.03)
Personal/ protective service worker	3.0 (0.44)	5.1 (0.59)	3.4 (0.76)	2.8 (0.77)

NOTE: Figures enclosed in parentheses are standard errors. Details may not add to totals due to rounding.

Table 30.--Percentage distribution, by type of occupation held by 1980 high school seniors: Academic year 1980-81 to 1983-84

Occupation	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	100.0	100.0	100.0	100.0
Technical/ professional	9.1 (.49)	10.6 (.58)	14.6 (.83)	15.4 (.85)
Sales clerk	9.6 (.56)	9.5 (.61)	7.9 (.66)	8.1 (.72)
Bookkeeper	1.3 (.18)	1.4 (.20)	1.4 (.24)	1.6 (.28)
Cashier	5.6 (.39)	5.5 (.45)	4.7 (.47)	4.5 (.48)
Receptionist	2.1 (.28)	2.1 (.31)	1.7 (.30)	1.7 (.31)
Secretary	4.0 (.33)	4.2 (.38)	3.9 (.44)	3.5 (.41)
Clerk	5.3 (.40)	4.7 (.37)	4.9 (.47)	4.5 (.41)
Sales/office worker	10.7 (.54)	11.6 (.60)	12.2 (.76)	12.2 (.79)
Craftsman	5.2 (.42)	4.9 (.46)	5.1 (.61)	5.4 (.66)
Construction worker	1.6 (.24)	1.5 (.27)	1.8 (.35)	1.5 (.31)
Stockworker	3.2 (.32)	2.6 (.33)	1.6 (.27)	1.7 (.31)
Operative	9.6 (.52)	9.9 (.61)	8.9 (.72)	8.8 (.73)
Laborer	2.4 (.28)	2.3 (.28)	2.0 (.33)	2.2 (.37)
Farmer	1.5 (.22)	1.2 (.22)	0.9 (.21)	0.9 (.24)
Cleaning service worker	3.1 (.30)	3.2 (.34)	2.9 (.38)	3.1 (.43)
Food service worker	15.9 (.72)	15.7 (.77)	16.2 (.97)	15.8 (.97)
Medical worker	3.5 (.34)	2.4 (.28)	2.1 (.34)	2.0 (.37)
Recreation attendant	2.6 (.29)	2.8 (.33)	2.9 (.40)	2.9 (.43)
Personal/ protective service worker	3.8 (.35)	3.9 (.40)	4.0 (.42)	3.9 (.44)

NOTE: Figures enclosed in parentheses are standard errors. Details may not add up to totals due to rounding.

Table 31.--Percentage distribution for three types of occupations held by 1980 high school seniors, by sex of student: Summer 1980 through academic year 1983-84

[In percent]

Occupation	1980	1981	1982	1983
			Summer	
Technical/professional worker				
Male	6.3 (0.94)	7.5 (0.89)	22.3 (2.68)	25.6 (3.37)
Female	4.2 (0.77)	7.5 (0.81)	18.9 (2.14)	26.2 (2.64)
Operatives (except transport)				
Male	19.4 (1.53)	18.3 (1.40)	15.7 (2.14)	17.2 (2.84)
Female	2.3 (0.46)	4.8 (0.74)	4.3 (1.02)	2.5 (0.92)
Food service worker				
Male	14.2 (1.40)	10.2 (1.07)	9.8 (1.69)	10.3 (2.27)
Female	22.9 (1.60)	19.3 (1.43)	19.6 (2.52)	17.5 (2.29)
			Academic year	
Technical/professional worker				
Male	10.5 (0.77)	11.4 (0.89)	15.7 (1.24)	16.8 (1.36)
Female	7.9 (0.56)	10.0 (0.68)	13.5 (0.99)	14.1 (1.03)
Operatives (except transport)				
Male	16.3 (0.90)	16.0 (1.06)	14.7 (1.23)	14.9 (1.24)
Female	3.8 (0.46)	4.5 (0.58)	3.6 (0.62)	3.1 (0.64)
Food service worker				
Male	12.5 (0.89)	12.3 (0.94)	13.2 (1.27)	13.0 (1.32)
Female	18.8 (1.05)	18.7 (1.18)	19.0 (1.34)	18.5 (1.39)

NOTE: Figures enclosed in parentheses are standard errors.

Sex of student. The regressions suggested large differences in the traditionally male/female-dominate types of jobs, like sales/office worker and food service worker jobs held by males and females. The percentage of males and females holding technical/professional, operative, and food service jobs is displayed in table 31. Traditionally male-dominated occupations, including operatives, are held more frequently by male college students than by female college students. For example, 19 percent of male college students worked as operatives in the summer of 1980. The corresponding estimate for females was much lower, 2 percent. Females were more likely to hold food service jobs than males during the academic year 1980-81.

The regression failed to find any difference for the percentage of males and females holding a technical/professional jobs. This finding was surprising because technical/professional jobs have historically been dominated by males. Examination of the descriptive tables identified an interaction of sex of student with academic year that probably dampened the regression finding. During academic year 1980-81, more males held technical/professional jobs than females (11 vs. 8 percent). During academic year 1983-84, 17 percent of males and 14 percent of females held technical/professional jobs, but this difference is not statistically significant (*ns*). During the summer of 1980, 6 percent of males and 4 percent of females held technical/professional jobs ($p<.10$). However, by the summer of 1983, 26 percent of males and females held technical/professional jobs (*ns*). Hence, postsecondary education appeared to be narrowing or eliminating the sex biases in technical/professional jobs. Further analyses will be needed to determine if this effect holds in their later careers.

Race/ethnicity. The regression identifies differences attributable to race/ethnicity. The regression coefficients indicate that blacks were less likely to hold technical/professional and food service jobs than whites. In addition, blacks were more likely to hold sales/office jobs than whites. These findings were supported by the descriptive estimates. The differences in the percent of college students holding technical/professional, sales/office, and food service jobs by race/ethnicity groups are shown in table 32. In the summer of 1980, blacks were less likely than whites to hold technical/professional jobs and food service jobs. However, blacks were more likely to have sales/office jobs than whites. During academic year 1980-81, for example, 17 percent of blacks and 10 percent of whites held sales/office jobs.

Family income. The regression found a relationship between family income and the percentage of students with technical/professional jobs. The coefficients do not follow a smooth linear pattern; however, there was a slight trend for higher family income students to be employed in technical/professional jobs than lower income students (table 33). For example, in the summer of 1980, 2 percent of students with family incomes below $12,000 held technical/professional jobs. The corresponding percentage for students with family incomes above $38,000 was 8 percent.

Table 32.--Percentage distribution for three types of occupations held by 1980 high school seniors, by race: Summer 1980 through academic year 1983-84

[In percent]

Occupation, by race/ethnicity	1980	1981	1982	1983
		Summer		
Technical/professional worker				
Hispanic	5.5 (1.99)	7.3 (2.24)	16.2 (3.71)	23.2 (6.13)
American Indian	4.3 (3.58)	26.1 (15.03)	6.0 (6.42)	35.3 (14.63)
Asian	5.7 (2.40)	17.1 (3.74)	39.5 (11.46)	44.5 (8.96)
Black	6.8 (1.78)	7.4 (1.43)	11.6 (2.43)	16.9 (3.59)
White	5.0 (0.72)	7.1 (0.70)	21.0 (2.04)	26.0 (2.27)
Sales/office worker				
Hispanic	18.7 (3.93)	19.4 (4.37)	12.5 (4.19)	11.7 (4.86)
American Indian	6.1 (2.59)	7.1 (4.79)	7.1 (7.65)	16.7 (14.50)
Asian	5.5 (2.56)	10.9 (2.93)	7.5 (3.14)	8.1 (4.20)
Black	12.8 (2.03)	14.6 (2.40)	19.0 (5.20)	20.3 (3.40)
White	8.2 (0.84)	8.0 (0.75)	13.4 (1.61)	14.3 (1.86)
Food service worker				
Hispanic	10.9 (2.59)	6.8 (1.69)	8.5 (2.56)	7.4 (3.51)
American Indian	17.5 (6.04)	6.6 (4.09)	25.9 (6.66)	4.8 (4.14)
Asian	22.7 (7.38)	11.4 (3.48)	6.2 (3.64)	9.5 (5.02)
Black	10.4 (1.62)	10.0 (1.35)	6.4 (1.58)	10.4 (3.00)
White	20.1 (1.26)	16.0 (1.06)	16.4 (1.82)	15.0 (1.78)
		Academic year		
Technical/professional worker				
Hispanic	9.9 (1.73)	10.1 (1.74)	13.7 (2.17)	13.0 (2.14)
American Indian	12.4 (6.66)	17.9 (9.89)	25.8 (16.82)	31.6 (16.26)
Asian	15.4 (3.03)	17.2 (3.36)	24.8 (3.96)	26.9 (3.88)
Black	7.9 (0.88)	9.1 (1.13)	10.5 (1.58)	12.7 (1.83)
White	9.0 (0.56)	10.6 (0.66)	14.7 (0.94)	15.2 (0.94)
Sales/office worker				
Hispanic	18.1 (2.34)	18.1 (2.27)	19.5 (3.19)	19.1 (3.57)
American Indian	9.1 (3.53)	12.0 (5.37)	9.6 (6.72)	11.2 (8.09)
Asian	10.5 (2.16)	11.1 (2.26)	13.1 (2.78)	12.1 (2.59)
Black	16.7 (1.86)	17.0 (1.97)	15.6 (2.71)	17.3 (3.23)
White	9.6 (0.58)	10.6 (0.65)	11.5 (0.80)	11.5 (0.84)
Food service worker				
Hispanic	11.3 (2.67)	7.3 (1.42)	7.5 (1.98)	8.6 (2.35)
American Indian	15.5 (4.28)	6.6 (2.78)	35.9 (23.1)	15.0 (12.33)
Asian	13.9 (2.62)	12.9 (2.48)	11.9 (3.20)	13.0 (3.52)
Black	10.5 (1.13)	10.9 (1.30)	10.4 (1.34)	9.9 (1.41)
White	16.8 (0.83)	16.8 (0.89)	17.3 (1.10)	16.9 (1.11)

NOTE: Figures enclosed in parentheses are standard errors.

Table 33.--Selected types of occupations held by 1980 high school seniors, by family income: Summer 1980 to 1983

[In percent]

Occupation, by family income	Summer of 1980	1981	1982	1983
Technical/professional				
Less than $7,000	2.1 (0.93)	4.7 (1.70)	8.3 (4.39)	34.3 (12.66)
$7,000-11,999	1.5 (0.45)	7.2 (2.09)	15.8 (5.20)	23.0 (7.94)
$12,000-15,999	2.9 (1.01)	6.6 (2.33)	21.1 (6.13)	23.5 (7.96)
$16,000-19,999	4.9 (1.58)	6.1 (1.54)	11.0 (2.99)	19.5 (6.03)
$20,000-24,999	2.9 (0.92)	7.5 (1.54)	22.2 (4.21)	29.6 (5.46)
$25,000-37,999	6.2 (1.59)	9.2 (1.58)	27.9 (4.26)	32.4 (5.23)
$38,000 or more	7.6 (1.54)	9.5 (1.46)	18.6 (3.59)	25.1 (4.00)
Sales/office worker				
Less than $7,000	6.5 (1.96)	8.5 (2.12)	18.5 (7.93)	26.9 (14.51)
$7,000-11,999	12.9 (2.99)	10.6 (2.05)	19.1 (6.19)	23.3 (8.78)
$12,000-15,999	7.8 (1.97)	8.6 (2.03)	14.7 (4.10)	25.8 (7.09)
$16,000-19,999	9.5 (2.01)	8.0 (1.76)	10.6 (3.85)	10.6 (4.72)
$20,000-24,999	9.4 (1.69)	6.3 (1.22)	10.8 (3.11)	13.8 (4.55)
$25,000-37,999	7.2 (1.48)	10.1 (1.71)	17.8 (3.21)	14.6 (3.82)
$38,000 or more	7.7 (1.67)	8.6 (1.53)	14.2 (3.46)	12.7 (3.34)
Operative				
Less than $7,000	11.5 (3.71)	6.9 (3.00)	3.6 (1.97)	2.8 (2.82)
$7,000-11,999	2.8 (0.78)	12.7 (2.89)	5.5 (2.07)	10.8 (6.18)
$12,000-15,999	7.0 (1.90)	11.4 (2.54)	2.9 (1.44)	4.1 (2.17)
$16,000-19,999	8.1 (1.94)	9.5 (2.18)	13.5 (3.94)	9.0 (5.05)
$20,000-24,999	13.7 (2.39)	14.1 (2.16)	13.8 (2.99)	16.9 (4.78)
$25,000-37,999	12.8 (2.12)	12.9 (2.04)	10.4 (3.32)	5.8 (2.79)
$38,000 or more	8.8 (1.70)	9.5 (1.63)	11.2 (2.59)	11.6 (2.99)
Food service worker				
Less than $7,000	7.9 (2.27)	8.4 (3.28)	16.6 (7.90)	9.0 (5.08)
$7,000-11,999	23.2 (4.02)	18.9 (3.49)	9.5 (3.36)	20.9 (9.02)
$12,000-15,999	23.1 (3.59)	17.7 (3.51)	16.0 (4.90)	9.6 (3.89)
$16,000-19,999	17.9 (2.96)	15.3 (2.49)	12.7 (4.06)	17.0 (6.07)
$20,000-24,999	18.0 (2.45)	13.7 (2.12)	13.1 (3.41)	9.0 (3.14)
$25,000-37,999	17.8 (2.56)	11.6 (1.63)	11.3 (2.54)	14.3 (3.75)
$38,000 or more	21.1 (2.78)	14.1 (1.88)	20.7 (3.22)	18.4 (3.02)

NOTE: Figures enclosed in parentheses are standard errors.

Table 34.--Selected types of occupations held by 1980 high school seniors, by family income: Academic year 1980-81 to 1983-84

[In percent]

Occupation, by family income	Academic year			
	1980-81	1981-82	1982-83	1983-84
Technical/professional				
Less than $7,000	7.0 (1.31)	7.5 (1.68)	13.6 (2.86)	15.6 (3.77)
$7,000-11,999	6.7 (1.27)	8.2 (1.31)	11.4 (2.24)	13.5 (2.57)
$12,000-15,999	10.4 (1.79)	11.1 (2.18)	16.7 (3.50)	18.3 (3.67)
$16,000-19,999	8.6 (1.38)	9.0 (1.57)	11.7 (2.16)	12.6 (2.32)
$20,000-24,999	9.9 (1.36)	12.0 (1.61)	16.5 (2.19)	17.6 (2.43)
$25,000-37,999	10.5 (1.14)	12.5 (1.43)	16.8 (2.01)	16.7 (2.06)
$8,000 or more	9.6 (1.05)	11.2 (1.15)	13.3 (1.58)	14.0 (1.64)
Sales/office worker				
Less than $7,000	11.1 (1.59)	12.7 (2.03)	13.7 (2.58)	12.2 (2.60)
$7,000-11,999	12.4 (1.61)	12.1 (1.80)	15.8 (2.98)	14.6 (2.54)
$12,000-15,999	8.3 (1.24)	9.3 (1.46)	12.2 (2.16)	15.2 (2.73)
$16,000-19,999	10.9 (1.55)	10.6 (1.59)	13.2 (2.23)	12.3 (2.22)
$20,000-24,999	9.8 (1.14)	10.2 (1.30)	8.6 (1.29)	9.5 (1.59)
$25,000-37,999	10.5 (1.19)	12.1 (1.40)	13.0 (1.64)	12.4 (1.67)
$38,000 or more	9.7 (1.17)	11.0 (1.33)	11.7 (1.60)	11.2 (1.66)
Operative				
Less than $7,000	7.9 (2.21)	7.4 (3.07)	2.7 (1.02)	3.3 (1.38)
$7,000-11,999	9.2 (1.69)	11.2 (2.11)	8.6 (2.64)	7.6 (2.56)
$12,000-15,999	8.3 (1.44)	11.4 (2.24)	7.3 (2.30)	7.6 (2.58)
$16,000-19,999	8.8 (1.48)	9.7 (1.66)	9.4 (1.78)	9.7 (2.03)
$20,000-24,999	12.1 (1.45)	10.7 (1.42)	9.3 (1.40)	9.5 (1.53)
$25,000-37,999	10.2 (1.21)	10.5 (1.47)	10.1 (1.74)	10.9 (1.94)
$38,000 or more	8.9 (1.08)	9.1 (1.21)	9.1 (1.73)	8.7 (1.51)
Food service worker				
Less than $7,000	9.1 (2.14)	6.8 (1.77)	9.7 (3.27)	9.1 (2.75)
$7,000-11,999	14.8 (2.00)	15.4 (2.33)	13.7 (2.52)	14.9 (2.97)
$12,000-15,999	16.7 (2.12)	15.2 (2.44)	18.3 (3.10)	14.5 (2.66)
$16,000-19,999	14.0 (1.77)	14.3 (2.07)	16.9 (2.86)	14.6 (2.62)
$20,000-24,999	15.7 (1.70)	16.5 (1.89)	17.0 (2.12)	17.2 (2.25)
$25,000-37,999	14.5 (1.38)	15.2 (1.54)	14.8 (1.81)	15.1 (1.91)
$38,000 or more	18.2 (1.61)	15.9 (1.58)	16.4 (1.92)	15.8 (1.93)

NOTE: Figures enclosed in parentheses are standard errors.

Ability level. The regression coefficients display a monotonic increase for increasing ability levels for technical/professional and sales/office jobs. The percent of college students working in six selected occupations are displayed in Tables 35 and 36. As the regression indicates, ability is substantially related to the percentage holding a technical/professional job. During the summer of 1983, for example, 4 percent of low ability and 28 percent of high ability students' jobs were technical/professional occupations.

Table 35.--Selected types of occupations held by 1980 high school seniors, by ability level: Summer 1980 to 1983

[In percent]

Occupation, by ability level	Summer of 1980	1981	1982	1983
Technical/professional				
Low	2.1 (0.71)	5.1 (1.93)	11.8 (4.51)	3.6 (2.56)
25 to 49 percent	2.7 (0.97)	4.7 (1.18)	17.7 (5.35)	21.6 (7.05)
50 to 75 percent	4.8 (1.21)	8.6 (1.40)	24.4 (3.96)	29.8 (4.75)
High	6.0 (1.01)	8.9 (1.00)	19.8 (2.20)	28.4 (2.89)
Sales clerk				
Low	9.1 (2.34)	12.1 (2.99)	9.1 (4.46)	4.2 (2.32)
25 to 49 percent	9.9 (1.97)	11.2 (1.94)	7.0 (2.32)	10.3 (5.01)
50 to 75 percent	8.6 (1.43)	7.9 (1.37)	5.2 (1.86)	4.2 (2.09)
High	9.2 (1.28)	8.4 (1.09)	5.5 (1.13)	2.6 (0.91)
Cashier				
Low	3.9 (0.94)	10.4 (2.69)	7.5 (3.41)	9.9 (5.87)
25 to 49 percent	9.2 (1.84)	7.6 (1.73)	6.2 (2.57)	5.3 (3.57)
50 to 75 percent	8.4 (1.48)	6.2 (1.20)	5.0 (1.96)	2.2 (1.10)
High	4.3 (0.85)	4.0 (0.79)	1.3 (0.44)	1.8 (0.81)
Sales/office worker				
Low	9.5 (2.02)	6.4 (1.29)	8.4 (3.36)	14.4 (5.19)
25 to 49 percent	9.1 (1.64)	8.6 (1.54)	11.9 (3.72)	11.1 (4.03)
50 to 75 percent	8.2 (1.33)	10.0 (1.42)	10.5 (2.76)	12.8 (3.27)
High	9.7 (1.32)	9.2 (1.09)	15.5 (2.00)	18.6 (2.59)
Operative				
Low	16.7 (3.39)	10.3 (2.72)	10.6 (4.65)	8.2 (4.43)
25 to 49 percent	8.8 (1.78)	9.8 (1.83)	15.9 (4.19)	6.9 (4.45)
50 to 75 percent	9.1 (1.52)	12.2 (1.67)	8.5 (2.37)	8.8 (2.76)
High	10.1 (1.32)	10.5 (1.15)	9.0 (1.55)	10.6 (2.36)
Food service worker				
Low	17.4 (3.25)	12.8 (3.04)	11.7 (5.21)	20.0 (8.18)
25 to 49 percent	19.0 (2.76)	15.9 (2.36)	9.4 (3.18)	16.3 (5.62)
50 to 75 percent	18.4 (2.11)	15.4 (1.90)	16.7 (3.22)	17.5 (3.89)
High	20.8 (1.79)	13.6 (1.29)	15.5 (1.87)	11.1 (1.89)
Personal/protective service worker				
Low	5.0 (1.86)	5.7 (2.22)	8.4 (5.43)	1.5 (1.56)
25 to 49 percent	2.6 (0.96)	5.4 (1.48)	5.2 (2.70)	6.1 (2.55)
50 to 75 percent	2.4 (0.83)	4.6 (1.10)	1.6 (0.88)	.6 (0.33)
High	2.9 (0.61)	4.4 (0.75)	2.7 (0.76)	2.7 (0.96)

NOTE: Figures enclosed in parentheses are standard errors.

Table 36.--Selected types of occupations held by 1980 high school seniors, by ability level: Academic year 1980-81 to 1983-84

[In percent]

Occupation, by ability level	Academic year			
	1980-81	1981-82	1982-83	1983-84
Technical/professional				
Low	5.3 (1.11)	5.8 (1.42)	6.4 (1.66)	6.2 (1.80)
25 to 49 percent	5.9 (0.91)	6.5 (0.93)	10.8 (2.15)	11.9 (2.25)
50 to 75 percent	9.3 (1.03)	11.2 (1.19)	14.6 (1.64)	15.6 (1.82)
High	12.3 (0.90)	13.9 (0.99)	16.3 (1.18)	17.1 (1.27)
Sales clerk				
Low	7.2 (1.18)	9.5 (1.86)	13.5 (4.15)	13.9 (4.65)
25 to 49 percent	11.2 (1.39)	12.9 (1.82)	12.7 (2.13)	13.4 (2.56)
50 to 75 percent	9.6 (1.05)	9.4 (1.15)	7.8 (1.33)	9.0 (1.53)
High	9.0 (0.82)	8.6 (0.83)	7.4 (0.88)	6.8 (.88)
Cashier				
Low	8.2 (1.40)	9.7 (2.08)	10.0 (2.50)	9.4 (2.63)
25 to 49 percent	7.3 (1.08)	6.7 (1.18)	5.5 (1.42)	5.7 (1.58)
50 to 75 percent	7.2 (0.91)	6.6 (0.99)	7.0 (1.33)	6.7 (1.36)
High	4.3 (0.54)	4.2 (0.59)	3.9 (0.57)	4.0 (.63)
Sales/office worker				
Low	9.2 (1.22)	10.1 (1.43)	11.1 (2.49)	10.7 (2.46)
25 to 49 percent	9.7 (1.12)	10.3 (1.20)	11.5 (1.53)	11.1 (1.70)
50 to 75 percent	10.4 (1.00)	11.8 (1.20)	13.0 (1.68)	13.3 (1.77)
High	10.5 (0.83)	11.0 (0.85)	11.7 (0.95)	12.1 (1.00)
Operative				
Low	11.7 (1.89)	10.4 (2.11)	8.2 (2.33)	7.6 (2.61)
25 to 49 percent	8.8 (1.20)	9.4 (1.55)	8.9 (2.22)	9.2 (2.54)
50 to 75 percent	9.4 (0.98)	9.7 (1.14)	7.2 (1.14)	6.7 (1.08)
High	9.3 (0.79)	9.6 (0.86)	9.2 (0.92)	9.5 (1.05)
Food service worker				
Low	13.9 (1.88)	14.3 (2.24)	15.9 (3.76)	17.4 (4.20)
25 to 49 percent	15.8 (1.73)	13.9 (1.78)	12.4 (2.16)	12.9 (2.34)
50 to 75 percent	16.2 (1.41)	17.2 (1.62)	19.3 (2.03)	16.2 (1.93)
High	15.5 (1.03)	15.4 (1.12)	15.3 (1.24)	14.9 (1.19)
Personal/protective service worker				
Low	5.0 (1.43)	4.0 (1.58)	2.7 (1.24)	2.7 (1.39)
25 to 49 percent	4.2 (0.87)	5.1 (1.12)	7.3 (2.00)	5.8 (1.68)
50 to 75 percent	3.0 (0.58)	2.9 (0.59)	2.9 (0.67)	2.9 (0.74)
High	3.4 (0.47)	3.4 (0.49)	3.7 (0.52)	3.6 (0.54)

NOTE: Figures enclosed in parentheses are standard errors.

Chapter 5

How Many Hours Per Week Were College Students Working?

The amount of time a college student devotes to employment is of great concern. If too much time is spent working, there may not be enough time left for studying and attending classes. On the other hand, if only a few hours per week are spent working gainfully, it is difficult to earn enough to apply savings to college costs. This chapter examines the distribution of hours per week for the jobs held by the HS&B students. As was true of chapter 4, the unit of analysis for this chapter was student-jobs, not students.

The regression of hours per week is displayed in table 37. Unlike earlier models, this regression includes occupation (with technical/professional student-jobs as the base group), and shows that type of occupation was related to the number of hours per week worked. In comparison to technical/professional workers, construction workers and farmers worked longer hours. Students enrolled in other types of postsecondary institutions tended to work longer hours than those enrolled in public 4-year colleges. Summer jobs required longer hours than academic-year jobs. Females worked shorter hours than males, and Asians worked shorter hours than whites. Finally, family income was related to the number of hours worked per week. Higher family income students worked more hours per week than lower family income students.

The descriptive estimates for hours worked per week and the regression findings are shown in tables 38 through 41.

Type of occupation. The regression identifies large differences in the number of hours worked for different occupations, with coefficients ranging from -2.83 to +8.60 in comparison to technical/professional jobs. The average number of hours worked for the 19 occupations are displayed in tables 38 and 39. As expected, students worked for fewer hours in some occupations than in others. During the summer of 1983, for example, cashiers worked an average of 21 hours per week. Construction workers averaged 43 hours per week.

Some of the most surprising estimates are included in table 39. During the academic year, many of the students were apparently working full time. For example, during academic year 1983-84, students holding craftsman jobs averaged 37 hours per week, construction workers averaged 40 hours per week, and farmers averaged 37 hours per week.

Summer versus academic-year jobs. As expected and as the regression establishes, students worked somewhat longer hours during the summer than during the academic year (tables 38 and 39). For example, in the summer of 1982, students averaged 31 hours per week, but during the academic year 1982-83, they averaged 28 hours per week. Although this difference is statistically significant, it is much smaller than expected. Indeed, the percentage of students working long hours during the academic year is substantially higher than expected.

Type of postsecondary institution. In spite of the regression analyses, a difference in the number of hours worked per week could not be identified within the descriptive tables. No statistically significant differences were found for the different types of postsecondary institutions (tables 40 and 41).

Table 37.--Regression parameters for hours worked per week for jobs held by 1980 high school seniors in postsecondary education: 1980-84

Variable	df	Parameter estimate
INTERCEPT	1	29.75
Occupation		
Sales clerk		-1.91
Bookkeeper		3.59
Cashier		-1.35
Receptionist		-0.32
Secretary		-0.64
Clerk		-0.70
Sales/office worker		-1.54
Craftsman		5.82
Construction worker		8.60
Stockworker		-0.51
Operative		4.38
Laborer		5.63
Farmer		7.30
Cleaning service		-1.69
Food service		-2.83
Medical worker		0.36
Recreation attendant		3.45
Personal/protective service		-1.89
R^2 without		0.0581
F-test	18	21.79*
Type of institution		
Private 4-year		-0.49
Public 2-year		-0.59
Other institutions		1.46
R^2 without		0.1063
F-test	3	3.95***
Timing		
Summer		1.69
R^2 without		0.1036
F-test	1	33.14*
Academic year		
1981-82		-1.15
1982-83		-0.38
1983-84		-0.20
R^2 without		0.1064
F-test	3	3.68

Table 37.--Regression parameters for hours worked per week for jobs held by 1980 high school seniors in postsecondary education: 1980-84 -- continued

Variable	df	Parameter estimate
Sex		
Female		-2.50
R^2 without		0.1005
F-test	1	57.60*
Race/ethnicity		
Hispanic		-0.79
American Indian		-0.17
Asian		-3.56
Black		0.04
R^2 without		0.1059
F-test	4	3.75***
Family income		
Less than $7,000		-2.35
$7,000-11,999		-2.25
$12,000-15,999		0.56
$20,000-24,999		0.39
$25,000-37,999		1.06
$38,000 or more		2.67
R^2 without		0.0978
F-test	6	13.15*
Ability level		
Low		1.03
Middle low		0.69
High		-0.31
R^2 without		0.1070
F-test	3	2.10
R^2	56322	0.1078

* denotes p<.001.
** denotes p<.005.
*** denotes p<.01.
NOTE: The repeated measures nature of the data required the degrees of freedom used for F-tests to be 7,040.

Table 38.--Mean number of hours worked in each type of occupation held by 1980 high school seniors: Summer 1980 to 1983

[In hours per week]

Occupation	Summer of 1980	1981	1982	1983
Total	30 (0.3)	30 (0.3)	31 (0.5)	30 (0.6)
Technical/ professional	28 (2.0)	28 (1.2)	32 (1.2)	29 (1.5)
Sales clerk	26 (0.9)	28 (0.9)	29 (1.8)	28 (2.9)
Bookkeeper	35 (2.1)	30 (2.0)	35 (2.3)	35 (3.1)
Cashier	27 (0.9)	27 (1.0)	30 (3.3)	21 (2.8)
Receptionist	31 (2.4)	29 (1.9)	32 (3.1)	32 (4.3)
Secretary	28 (1.5)	27 (1.4)	26 (2.2)	32 (2.4)
Clerk	28 (1.5)	28 (1.4)	28 (2.7)	28 (3.3)
Sales/office worker	29 (1.2)	27 (1.1)	28 (1.4)	29 (1.9)
Craftsman	37 (1.5)	35 (1.1)	38 (1.5)	39 (2.1)
Construction worker	39 (0.6)	39 (1.9)	42 (0.8)	43 (1.8)
Stockworker	30 (1.5)	31 (1.7)	32 (4.1)	34 (7.5)
Operative	34 (0.9)	35 (0.9)	34 (1.6)	33 (1.6)
Laborer	36 (2.0)	37 (1.5)	40 (3.0)	34 (6.1)
Farmer	43 (2.0)	35 (4.0)	32 (4.3)	49 (5.7)
Cleaning service worker	29 (1.7)	31 (1.5)	28 (3.7)	34 (2.6)
Food service worker	28 (0.7)	26 (0.7)	26 (1.1)	27 (1.5)
Medical worker	31 (1.7)	29 (1.6)	28 (2.9)	19 (5.6)
Recreation attendant	35 (1.6)	34 (1.7)	32 (3.7)	38 (2.2)
Personal/ protective service worker	32 (2.0)	27 (1.4)	33 (3.9)	33 (6.7)

NOTE: Figures enclosed in parentheses are standard errors.

Table 39.--Mean number of hours worked in each type of occupation held by 1980 high school seniors: Academic year 1980-81 to 1983-84

[In hours per week]

Occupation	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	29 (0.2)	28 (0.3)	28 (0.3)	28 (0.4)
Technical/ professional	28 (0.8)	27 (0.8)	27 (0.8)	27 (0.9)
Sales clerk	27 (0.6)	26 (0.7)	26 (1.0)	25 (1.0)
Bookkeeper	30 (1.5)	29 (1.7)	29 (2.0)	30 (2.4)
Cashier	25 (0.5)	25 (0.8)	25 (1.1)	24 (1.0)
Receptionist	28 (1.4)	27 (1.6)	25 (2.1)	26 (2.5)
Secretary	27 (1.2)	25 (1.1)	24 (1.1)	25 (1.5)
Clerk	27 (1.0)	26 (1.0)	27 (1.3)	27 (1.2)
Sales/office worker	26 (0.7)	25 (0.7)	25 (0.8)	25 (0.8)
Craftsman	35 (0.9)	34 (1.0)	36 (1.0)	37 (1.1)
Construction worker	40 (0.9)	41 (1.1)	40 (0.8)	40 (1.2)
Stockworker	29 (1.0)	29 (1.3)	28 (1.9)	29 (2.0)
Operative	34 (0.7)	34 (0.7)	33 (0.9)	34 (0.9)
Laborer	35 (1.6)	35 (1.8)	33 (2.4)	33 (2.4)
Farmer	37 (2.1)	35 (3.2)	33 (2.7)	37 (4.2)
Cleaning service worker	27 (1.4)	26 (1.4)	25 (1.6)	25 (1.6)
Food service worker	26 (0.5)	25 (0.6)	24 (0.6)	24 (0.6)
Medical worker	28 (1.1)	27 (1.3)	27 (1.6)	25 (2.0)
Recreation attendant	30 (1.6)	32 (1.5)	32 (2.0)	32 (2.2)
Personal/ protective service worker	28 (1.1)	26 (1.1)	27 (1.4)	28 (1.3)

NOTE: Figures enclosed in parentheses are standard errors.

Table 40.--Mean number of hours worked by 1980 high school seniors, by selected student characteristics: Summer 1980 to 1983

[In hours per week]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	30 (0.3)	30 (0.3)	31 (0.5)	30 (0.6)
Type of postsecondary institution				
Private 4-Year	30 (0.7)	29 (0.6)	30 (0.8)	32 (0.9)
Public 4-Year	31 (0.5)	30 (0.5)	31 (0.7)	29 (0.9)
Public 2-Year	29 (0.6)	29 (0.6)	low n	low n
Other institutions	31 (1.2)	low n	low n	low n
Sex				
Male	33 (0.4)	33 (0.5)	34 (0.7)	34 (0.9)
Female	28 (0.5)	27 (0.4)	28 (0.6)	27 (0.8)
Race/ethnicity				
Hispanic	31 (1.1)	29 (1.3)	27 (1.3)	29 (2.4)
American Indian	32 (1.4)	29 (2.8)	21 (1.6)	25 (3.4)
Asian	29 (1.8)	27 (1.9)	26 (3.7)	30 (3.5)
Black	29 (0.7)	29 (0.7)	30 (1.0)	27 (1.2)
White	30 (0.4)	30 (0.4)	31 (0.5)	31 (0.7)
Family income				
Less than $7,000	28 (1.2)	26 (1.5)	26 (2.2)	19 (1.9)
$7,000-11,999	29 (1.2)	26 (0.9)	25 (2.2)	25 (2.7)
$12,000-15,999	30 (0.9)	28 (1.1)	28 (1.7)	25 (1.7)
$16,000-19,999	30 (0.9)	29 (0.9)	29 (1.9)	29 (2.3)
$20,000-24,999	31 (0.7)	30 (0.7)	30 (1.3)	30 (1.5)
$25,000-37,999	31 (0.8)	31 (0.7)	32 (1.1)	31 (1.5)
$38,000 or more	31 (0.7)	32 (0.7)	34 (0.9)	33 (1.1)
Ability level				
Low	29 (0.9)	29 (1.1)	31 (2.5)	31 (2.8)
Middle low	31 (0.8)	30 (0.8)	31 (1.5)	26 (1.8)
Middle high	30 (0.6)	29 (0.6)	29 (1.2)	28 (1.3)
High	30 (0.6)	30 (0.5)	30 (0.7)	31 (0.8)

NOTE: Figures enclosed in parentheses are standard errors.

Table 41.--Mean number of hours worked by 1980 high school seniors, by selected student characteristics: Academic year 1980-81 to 1983-84

[In hours per week]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	29 (0.2)	28 (0.3)	28 (0.3)	28 (0.4)
Type of postsecondary institution				
Private 4-Year	28 (0.5)	27 (0.5)	28 (0.5)	28 (0.6)
Public 4-Year	29 (0.4)	28 (0.4)	27 (0.4)	27 (0.4)
Public 2-Year	28 (0.4)	28 (0.5)	low n	low n
Other institutions	29 (0.9)	low n	low n	low n
Sex				
Male	31 (0.4)	31 (0.4)	30 (0.5)	30 (0.5)
Female	26 (0.3)	25 (0.3)	25 (0.4)	25 (0.4)
Race/ethnicity				
Hispanic	29 (0.7)	28 (0.7)	27 (0.9)	27 (1.1)
American Indian	31 (1.4)	28 (1.6)	25 (2.4)	27 (2.3)
Asian	25 (1.0)	24 (1.0)	23 (1.3)	23 (1.4)
Black	28 (0.5)	27 (0.6)	27 (0.8)	26 (0.9)
White	29 (0.3)	28 (0.3)	28 (0.4)	28 (0.4)
Family income				
Less than $7,000	25 (0.8)	25 (0.9)	25 (1.0)	25 (1.3)
$7,000-11,999	26 (0.7)	25 (0.7)	24 (0.9)	24 (1.0)
$12,000-15,999	29 (0.7)	28 (0.8)	27 (1.1)	28 (1.2)
$16,000-19,999	28 (0.6)	26 (0.7)	26 (0.9)	27 (1.0)
$20,000-24,999	29 (0.5)	28 (0.6)	27 (0.7)	27 (0.7)
$25,000-37,999	29 (0.5)	28 (0.6)	28 (0.7)	28 (0.8)
$38,000 or more	30 (0.5)	30 (0.6)	30 (0.6)	31 (0.7)
Ability level				
Low	29 (0.6)	28 (0.8)	28 (1.1)	28 (1.1)
Middle low	30 (0.6)	28 (0.6)	27 (0.9)	27 (1.0)
Middle high	28 (0.4)	28 (0.5)	27 (0.6)	27 (0.7)
High	28 (0.4)	28 (0.4)	28 (0.4)	28 (0.5)

NOTE: Figures enclosed in parentheses are standard errors.

Sex of student. The regression coefficient indicates that female college students averaged fewer hours per week on the job than male college students. In the summer of 1980, for example (table 40), male college students averaged 33 hours per week on the job, and female students averaged 28 hours per week. During academic year 1980-81, males averaged 31 hours and females averaged 26 hours. Although females worked shorter hours on each job, they may have worked longer hours because they held more jobs.

Race/ethnicity. The distribution of hours worked by the students of differing race/ethnicities is shown in tables 40 and 41. The regression coefficients indicated that Asians worked fewer hours than whites. For example, during academic year 1980-81, Asians averaged 25 hours per week on the job, and whites averaged 29 hours per week.

Family income. The regression parameters for family income display a monotonic relationship with the average hours per week. Descriptive tables 40 and 41 display similar findings. For example, students with family incomes of less than $7,000 averaged 25 hours per week during AY 1980-81 (table 41). In comparison, students with family incomes of more than $38,000 averaged 30 hours per week.

Percentage Distribution of Hours Worked per Week

The average number of hours worked by students, particularly during the academic year while they attended college full time, were relatively large. The percentage distribution of the number of hours worked per week is presented in table 42. During the academic years, a stable portion of about 8 percent of the students worked more than full time (41 or more hours per week). However, the percentage of students working less than 20 hours per week increased between 1980-81 and 1983-84 (24 vs. 28 percent).

Table 42.--Percentage distribution for number of hours worked per week by 1980 high school seniors: Summer 1980 through academic year 1983-84

Hours worked	1980	1981	1982	1983
		Summer		
Less than 20	17.3 (1.02)	21.2 (0.98)	21.0 (1.52)	22.3 (1.96)
20-29	24.0 (1.13)	21.2 (1.08)	17.8 (1.47)	15.7 (1.65)
30-40	50.5 (1.33)	48.1 (1.30)	51.2 (1.96)	51.7 (2.53)
41 and over	8.3 (0.83)	9.5 (0.75)	10.0 (1.21)	10.3 (1.51)
		Academic year		
Less than 20	24.2 (0.80)	26.7 (0.89)	27.7 (1.02)	27.6 (1.07)
20-29	23.6 (0.76)	23.7 (0.84)	22.7 (1.01)	22.1 (1.04)
30-40	44.0 (0.92)	41.4 (0.99)	41.8 (1.18)	42.0 (1.29)
41 and over	8.2 (0.53)	8.2 (0.57)	7.8 (0.66)	8.3 (0.75)

NOTE: Figures enclosed in parentheses are standard errors.

Chapter 6

How Much Did College Students Earn Per Hour?

The minimum wage in 1980 was $3.10 per hour and $3.35 per hour in 1981-84. The pay rates for college students' jobs are generally thought to be at or near the minimum wage. Several factors contribute to this belief. First, college students frequently work part time, and part-time employment has traditionally paid less than full-time employment. Second, college students' jobs must allow them to attend classes, primarily during the day. This timing factor typically means that college students are not the hiring firms' primary employees, and as such they are paid less. Finally, college students are relatively inexperienced workers because of their short time in the job market and their commitment to continuing their education.

This chapter examines the hourly pay rates reported by the HS&B seniors between 1980-84, with student-jobs as the unit of analysis, rather than students. Hence, non-working students did not contribute to the analyses in this chapter. It should be noted that student reports of this type may be biased upward--that is, students probably reported their hourly wage rates for the highest rate they ever earned from the job.

The regression of hourly pay rates for the HS&B seniors is shown in table 43. The hourly pay rates were related to students' occupations, the students' year of college, and race/ethnicity. Interestingly, a relationship was not found for sex of student or ability level.

Descriptive estimates for the regression findings are illustrated in tables 44 through 47.

Occupation. The regression identifies differences in the hourly rates of pay ranging from $1.09 less to $.67 more for some occupations in comparison to technical/professional jobs (illustrated in tables 44 and 45). For example, during the summer of 1980, students employed in personal/protective service earned an average of $6.35 per hour, while students working as cashiers earned an average of $3.52 per hour.

Academic year. The regression suggests that as students progressed in college, their pay rates increased. This effect is especially clear in in table 44, where the pay rates show a steady increase during the 4-year period. Indeed, the 1983 rate of $5.57 is substantially higher than the 1980 rate of $4.44. During the academic years (table 45), the rate increased. For example, in AY 1980-81, the hourly rate was $4.72 and in AY 1983-84 it was $5.05.

Race/ethnicity. The regression coefficients indicate that blacks were paid less than whites. For example, during the summer blacks earned about $.50 less per hour than whites (table 46). In the summer of 1980, blacks earned $4.01 per hour and whites earned $4.51 and in the summer of 1983, blacks earned $5.04 per hour and whites earned $5.55.

During the academic year, blacks earned about $.25 per hour less than whites (table 47). For example, in AY 1980-81, blacks earned $4.50 per hour and whites earned $4.74.

Table 43.--Regression parameters for pay rates (in dollars per hour) for jobs held by 1980 HS&B seniors enrolled in postsecondary education: 1980-83

Variable	df	Parameter estimate
INTERCEPT	1	4.98
Occupation		
Sales clerk		-1.09
Bookkeeper		-0.55
Cashier		-1.36
Receptionist		-0.94
Secretary		-0.91
Clerk		-0.69
Sales/office worker		-0.58
Craftsman		-0.03
Construction worker		0.09
Stockworker		-0.96
Operative		-0.50
Laborer		0.23
Farmer		-0.94
Cleaning service		-0.73
Food service		-0.90
Medical worker		-0.98
Recreation attendant		0.67
Personal/protective service		0.02
R^2 without		0.0253
F-test	18	13.79*
Type of institution		
Private 4-year		0.03
Public 2-year		0.01
Other institutions		-0.12
R^2 without		0.0583
F-test	3	0.50
Timing		
Summer		-0.03
R^2 without		0.0585
F-test	1	0.00
Academic year		
1981-82		0.17
1982-83		0.51
1983-84		0.83
R^2 without		0.0477
F-test	3	26.92*

Table 43.--Regression parameters for pay rates (in dollars per hour) for jobs held by 1980 HS&B seniors enrolled in postsecondary education: 1980-83 -- continued

Variable	df	Parameter estimate
Sex		
Female		0.09
R^2 without		0.0583
F-test	1	1.50
Race/ethnicity		
Hispanic		-0.19
American Indian		-0.55
Asian		0.26
Black		-0.34
R^2 without		0.0566
F-test	4	3.55**
Family income		
Less than $7,000	1	.00
$7,000-11,999	1	0.09
$12,000-15,999	1	-0.04
$20,000-24,999	1	-0.07
$25,000-37,999	1	-0.08
$38,000 or more	1	0.14
R^2 without		0.0576
F-test		1.12
Ability level		
Low	1	-0.09
Middle low	1	0.06
High	1	-0.06
R^2 without		0.0582
F-test		0.75
R^2	56322	0.0585

* denotes p<.001.

** denotes p<.01.

NOTE: The repeated measures nature of the data required the degrees of freedom used for F-tests to be 7,040.

Table 44.--Mean wage rate for each type of occupation held by 1980 high school seniors: Summer 1980 to 1983

[In current dollars per hour]

Occupation	Summer of			
	1980	1981	1982	1983
Total	4.44 (.073)	4.75 (.072)	5.39 (0.119)	5.57 (0.155)
Technical/ professional	5.04 (.433)	5.95 (.324)	5.94 (0.236)	5.84 (0.256)
Sales clerk	3.82 (.152)	4.08 (.137)	5.08 (0.388)	5.49 (0.461)
Bookkeeper	3.73 (.108)	4.55 (.222)	4.83 (0.693)	4.20 (0.694)
Cashier	3.52 (.075)	3.78 (.079)	4.45 (0.473)	4.81 (0.423)
Receptionist	3.72 (.144)	4.49 (.278)	4.41 (0.418)	5.75 (0.928)
Secretary	3.90 (.181)	4.33 (.167)	4.56 (0.305)	5.69 (0.728)
Clerk	4.32 (.246)	4.78 (.205)	5.08 (0.407)	6.13 (0.616)
Sales/office worker	4.35 (.222)	4.57 (.232)	5.63 (0.306)	5.56 (0.406)
Craftsman	5.20 (.361)	5.80 (.418)	6.19 (1.065)	5.41 (0.711)
Construction worker	4.96 (.402)	6.13 (.427)	5.66 (0.588)	6.22 (1.547)
Stockworker	3.68 (.122)	4.29 (.225)	4.72 (0.448)	4.36 (0.639)
Operative	4.37 (.142)	4.65 (.119)	5.30 (0.333)	5.64 (0.494)
Laborer	5.76 (.586)	5.20 (.303)	5.00 (0.561)	5.63 (0.881)
Farmer	4.61 (.598)	4.55 (.671)	5.29 (0.503)	7.31 (1.455)
Cleaning service worker	4.08 (.231)	4.2 (.155)	4.53 (0.459)	4.74 (0.468)
Food service worker	4.32 (.178)	4.39 (.217)	4.91 (0.254)	4.72 (0.267)
Medical worker	4.16 (.384)	4.89 (.437)	4.72 (0.363)	5.58 (0.812)
Recreation attendant	5.76 (.669)	6.07 (.746)	7.57 (1.418)	7.70 (1.863)
Personal/ protective service worker	6.35 (.717)	5.15 (.376)	4.92 (0.532)	4.77 (0.775)

NOTE: Figures enclosed in parentheses are standard errors.

Table 45.--Mean wage rate for each type of occupation held by 1980 high school seniors: Academic year 1980-81 to 1983-84

[In current dollars per hour]

Occupation	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	4.72 (.052)	4.83 (.055)	5.02 (.065)	5.05 (.070)
Technical/ professional	5.48 (.162)	5.80 (.182)	5.64 (.168)	5.69 (.182)
Sales clerk	4.20 (.094)	4.40 (.120)	4.79 (.208)	4.79 (.217)
Bookkeeper	4.91 (.212)	5.03 (.240)	5.59 (.312)	5.41 (.321)
Cashier	3.89 (.077)	3.91 (.081)	3.92 (.103)	3.91 (.110)
Receptionist	4.58 (.192)	4.56 (.196)	4.77 (.274)	4.83 (.293)
Secretary	4.35 (.108)	4.41 (.104)	4.58 (.162)	4.55 (.169)
Clerk	4.56 (.121)	4.75 (.162)	4.71 (.188)	4.83 (.215)
Sales/office worker	4.64 (.137)	4.75 (.165)	4.89 (.141)	4.83 (.139)
Craftsman	5.49 (.238)	5.64 (.303)	5.44 (.245)	5.40 (.252)
Construction worker	5.62 (.375)	5.77 (.465)	5.96 (.535)	6.25 (.697)
Stockworker	4.18 (.132)	4.23 (.159)	4.17 (.273)	4.18 (.290)
Operative	4.67 (.105)	4.82 (.110)	4.95 (.153)	5.11 (.178)
Laborer	5.57 (.322)	5.61 (.349)	5.56 (.500)	5.66 (.514)
Farmer	4.16 (.302)	4.45 (.456)	5.59 (.846)	4.93 (.631)
Cleaning service worker	5.09 (.397)	4.72 (.354)	4.72 (.271)	4.76 (.287)
Food service worker	4.43 (.139)	4.50 (.149)	4.65 (.141)	4.72 (.153)
Medical worker	4.50 (.159)	4.82 (.258)	5.05 (.370)	5.36 (.448)
Recreation attendant	6.38 (.572)	5.93 (.588)	6.59 (.829)	6.67 (.906)
Personal/ protective service worker	5.20 (.261)	5.02 (.271)	5.46 (.386)	5.06 (.328)

NOTE: Figures enclosed in parentheses are standard errors.

Table 46.--Mean wage rate received by 1980 high school seniors, by selected student characteristics: Summer 1980 to 1983

[In current dollars per hour]

Student characteristics	Summer of			
	1980	1981	1982	1983
Total	4.44 (.073)	4.75 (.072)	5.39 (.119)	5.57 (.155)
Type of institution				
Private 4-Year	4.55 (.156)	4.84 (.143)	5.46 (.203)	5.80 (.275)
Public 4-Year	4.41 (.109)	4.74 (.101)	5.35 (.151)	5.39 (.160)
Public 2-Year	4.42 (.154)	4.66 (.153)	low n	low n
Other institutions	4.28 (.227)	low n	low n	low n
Sex				
Male	4.46 (.094)	4.82 (.095)	5.53 (.179)	5.62 (.218)
Female	4.41 (.112)	4.68 (.108)	5.28 (.163)	5.52 (.218)
Race/ethnicity				
Hispanic	4.15 (.136)	4.76 (.305)	5.31 (.436)	6.00 (.551)
American Indian	3.93 (.222)	4.43 (.317)	4.65 (.683)	7.27 (.771)
Asian	4.48 (.344)	4.66 (.148)	5.86 (.412)	6.13 (.730)
Black	4.01 (.074)	4.32 (.088)	5.18 (.220)	5.04 (.258)
White	4.51 (.086)	4.79 (.084)	5.39 (.133)	5.55 (.166)
Family income				
Less than $7,000	4.21 (.199)	4.89 (.625)	5.31 (.469)	5.07 (.590)
$7,000-11,999	4.37 (.266)	4.57 (.188)	6.01 (.827)	6.11 (.888)
$12,000-15,999	4.64 (.249)	4.51 (.214)	4.66 (.229)	4.51 (.282)
$16,000-19,999	4.05 (.153)	4.56 (.195)	5.33 (.341)	5.86 (.379)
$20,000-24,999	4.41 (.177)	4.65 (.145)	5.41 (.252)	6.17 (.355)
$25,000-37,999	4.20 (.124)	4.77 (.152)	5.16 (.192)	4.98 (.208)
$38,000 or more	5.15 (.276)	5.10 (.190)	5.46 (.212)	5.48 (.196)
Ability level				
Low	4.33 (.174)	4.77 (.264)	5.16 (.474)	6.48 (.814)
Middle low	4.42 (.212)	4.70 (.208)	5.10 (.298)	5.12 (.358)
Middle high	4.50 (.166)	4.74 (.148)	5.39 (.299)	5.15 (.274)
High	4.46 (.137)	4.73 (.098)	5.34 (.137)	5.66 (.174)

NOTE: Figures enclosed in parentheses are standard errors.

Table 47.--Mean wage rate received by 1980 high school seniors, by selected student characteristics: Academic year 1980-81 to 1983-84

[In current dollars per hour]

Student characteristics	Academic year			
	1980-81	1981-82	1982-83	1983-84
Total	4.72 (.052)	4.83 (.055)	5.02 (.065)	5.05 (.070)
Type of institution				
Private 4-Year	4.94 (.127)	5.00 (.121)	5.17 (.122)	5.25 (.129)
Public 4-Year	4.76 (.071)	4.84 (.069)	4.94 (.072)	4.94 (.075)
Public 2-Year	4.57 (.098)	4.62 (.118)	low n	low n
Other institutions	4.49 (.124)	low n	low n	low n
Sex				
Male	4.81 (.065)	4.94 (.072)	5.06 (.088)	5.09 (.096)
Female	4.65 (.075)	4.73 (.079)	4.98 (.088)	5.01 (.095)
Race/ethnicity				
Hispanic	4.79 (.160)	4.87 (.214)	4.81 (.131)	4.92 (.155)
American Indian	4.41 (.187)	4.35 (.231)	4.32 (.135)	4.57 (.338)
Asian	4.90 (.140)	5.09 (.157)	5.35 (.192)	5.38 (.215)
Black	4.50 (.071)	4.52 (.082)	4.74 (.106)	4.82 (.117)
White	4.74 (.059)	4.86 (.063)	5.04 (.073)	5.06 (.077)
Family income				
Less than $7,000	4.61 (.147)	4.41 (.144)	4.77 (.183)	4.44 (.182)
$7,000-11,999	4.70 (.140)	4.74 (.160)	5.04 (.238)	5.09 (.285)
$12,000-15,999	4.40 (.140)	4.41 (.132)	4.77 (.227)	4.82 (.259)
$16,000-19,999	4.57 (.132)	4.84 (.174)	4.80 (.129)	4.95 (.148)
$20,000-24,999	4.64 (.094)	4.70 (.104)	5.04 (.143)	5.07 (.143)
$25,000-37,999	4.73 (.092)	4.87 (.113)	4.96 (.133)	4.92 (.119)
$38,000 or more	5.13 (.140)	5.04 (.112)	5.19 (.135)	5.20 (.137)
Ability level				
Low	4.71 (.161)	4.77 (.200)	4.56 (.145)	4.64 (.162)
Middle low	4.55 (.104)	4.71 (.115)	5.14 (.206)	5.04 (.180)
Middle high	4.58 (.089)	4.67 (.095)	4.97 (.131)	4.93 (.141)
High	4.89 (.083)	4.93 (.078)	5.01 (.081)	5.08 (.086)

NOTE: Figures enclosed in parentheses are standard errors.

Chapter 7

How Was Working Related to Persistence in College?

Working may be beneficial for financing college costs, but it may reduce study time and hurt grades. In prior chapters, we have illustrated that the jobs held by college students frequently require long hours, and some students worked full time. It may be that some college students work so much that their studies suffer. On the other hand, work may motivate students to study harder and the socialization associated with working may be beneficial for college persistence.

This chapter presents a simple analysis of the effects of working on persistence of college students during the academic year. To estimate the effects of employment, five groups of college students were compared. First, the group of college students who did not work during the summer or academic year was identified. This group was labeled as *No work*. All of the other groups worked. The second group did not work enough to earn $200 during the summer or during the academic year. This group was labeled as *Trivial work*. Groups 3-5 were identified based on their earnings. The third group, labeled *AY work*, earned $200 or more during the academic year. The fourth group, labeled as *Summer work*, was identified from the pool of remaining students, including those students who earned $200 or more during the summer. The fifth group, all remaining students, were labeled as *Some work*. The *Some work* group included students who earned more than $200 total, but did not earn $200 during the summer or $200 during the academic year.

The measure of persistence presented in this chapter is the percentage of students who persisted during the academic year for 8 or 9 months. (The cutoff point for the HS&B data was February, 1984. As such, the measure for AY 1983-84 was persistence for 6 months, rather than 8 or 9 months as used for AY 1980-83.) The subsequent year samples were conditioned upon successful persistence in the prior year. That is, the AY 1982-83 sample included only those students who persisted for 8 or 9 months in AY 1981-82.

The regression of persistence for the HS&B seniors is shown in table 48. Variation in persistence was related to the different groups of students identified based on their employment. Persistence also was related to type of postsecondary institution, academic year, race/ethnicity, family income, and ability level.

The regression findings are presented in tables 49-51.

Table 48.--Regression parameters for persistence during the year by 1980 HS&B seniors enrolled in postsecondary education during 1980-83

Variable	df	Parameter estimate
INTERCEPT		85.97
Work group		
Trivial work		4.94
Some work		2.09
Summer work		2.02
During AY work		6.43
R^2 without		0.0648
F-test	4	15.77*
Type of institution		
Private 4-year		1.89
Public 2-year		-11.80
Other institutions		-15.21
R^2 without		0.0464
F-test	3	113.16*
Academic year		
1981-82		-2.87
1982-83		3.94
1983-84		3.37
R^2 without		0.0634
F-test	3	28.04*
Sex		
Female		-0.04
R^2 without		0.0690
F-test	1	0.00
Race/ethnicity		
Hispanic		1.63
American Indian		-3.44
Asian		6.01
Black		-1.53
R^2 without		0.0678
F-test	4	4.51**
Family income		
Less than $7,000		-4.40
$7,000-11,999		0.92
$12,000-15,999		-0.68
$20,000-24,999		1.42
$25,000-37,999		2.76
$38,000 or more		2.80
R^2 without		0.0666
F-test	6	6.01*

Table 48.--Regression parameters for persistence during the year by 1980 HS&B seniors enrolled in postsecondary education during 1980-83 -- continued

Variable	df	Parameter estimate
Ability level		
Low		-5.13
Moderately low		-0.59
High		3.43
R^2 without		0.0646
F-test	3	22.03*
R^2	13985	0.0690

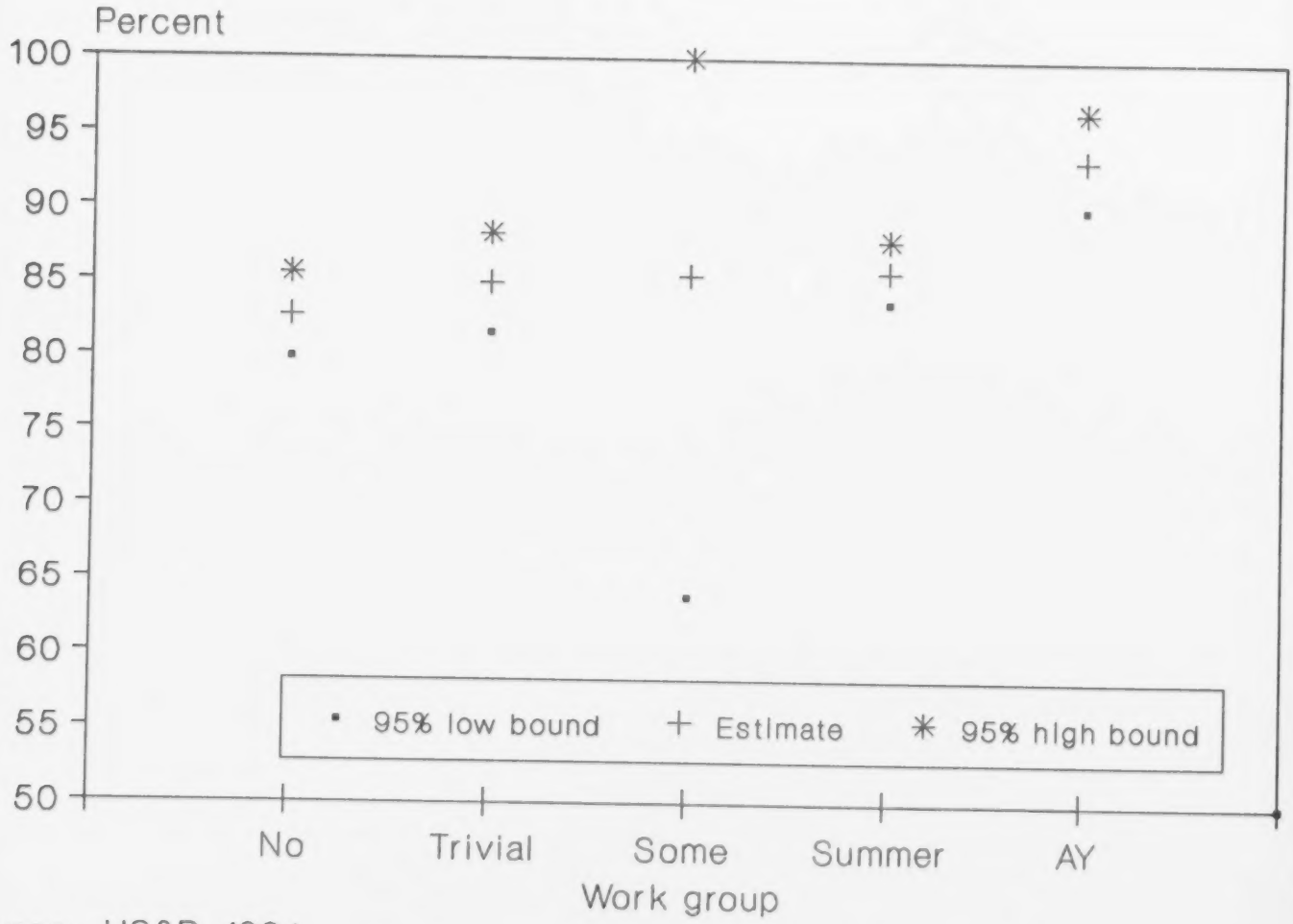
* denotes p<.001.

** denotes p<.005.

Employment groups. The regression identified positive differences in the persistence of the four working groups of students in comparison to the nonworking group. The differences in the persistence of the employment groups are described in figures 1-4. For AY 1980-81, employment during the academic year had a positive effect on persistence--83 percent of students who did not work persisted, while 93 percent of students who worked persisted. The confidence intervals of the *No work*, *Trivial work*, *Some work*, and *Summer work* groups overlap, as shown in figure 1.

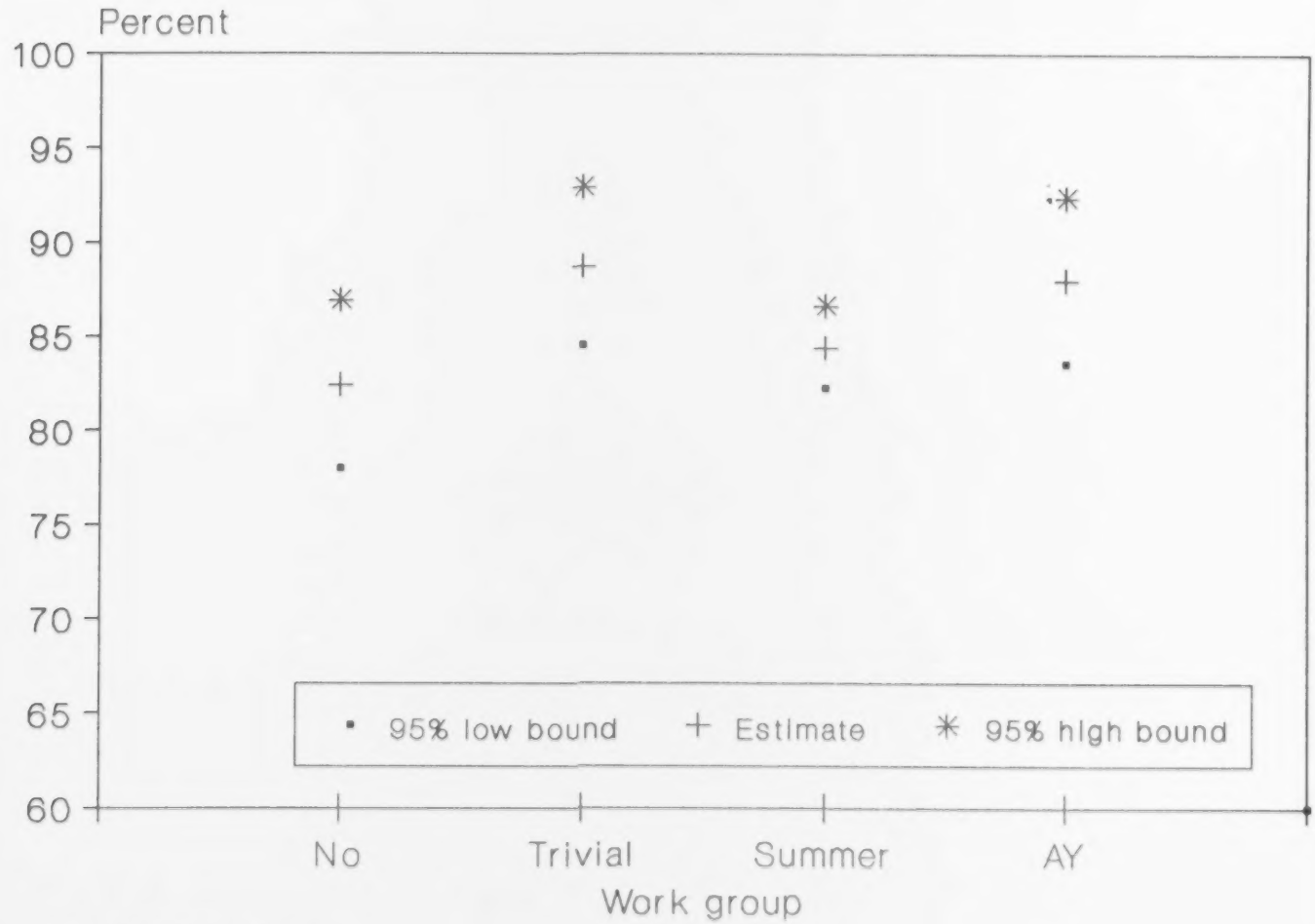
The patterns of differences in figures 2, 3, and 4 are somewhat different (note that the sample size was too small for the *Some work* group in these figures). However, the *AY work* group persisted better than the *No work* group in each case (p<.10 for AY 1981-82). The effects of other work, as those associated with the *Trivial work* and *Summer work* groups, were not as clear.

Figure 1
1980-81 Academic year persistence



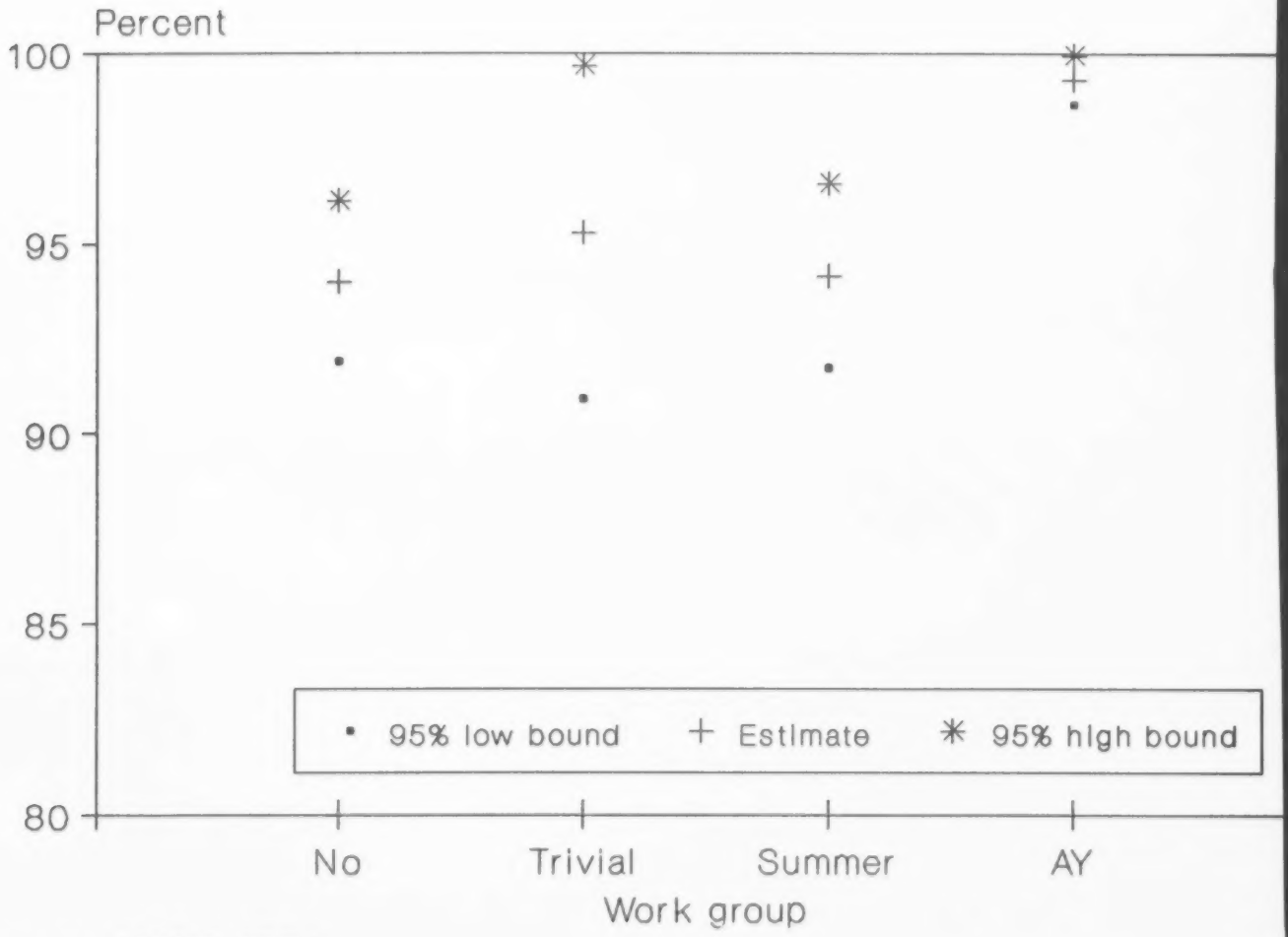
Source: HS&B, 1984

Figure 2
1981-82 Academic year persistence



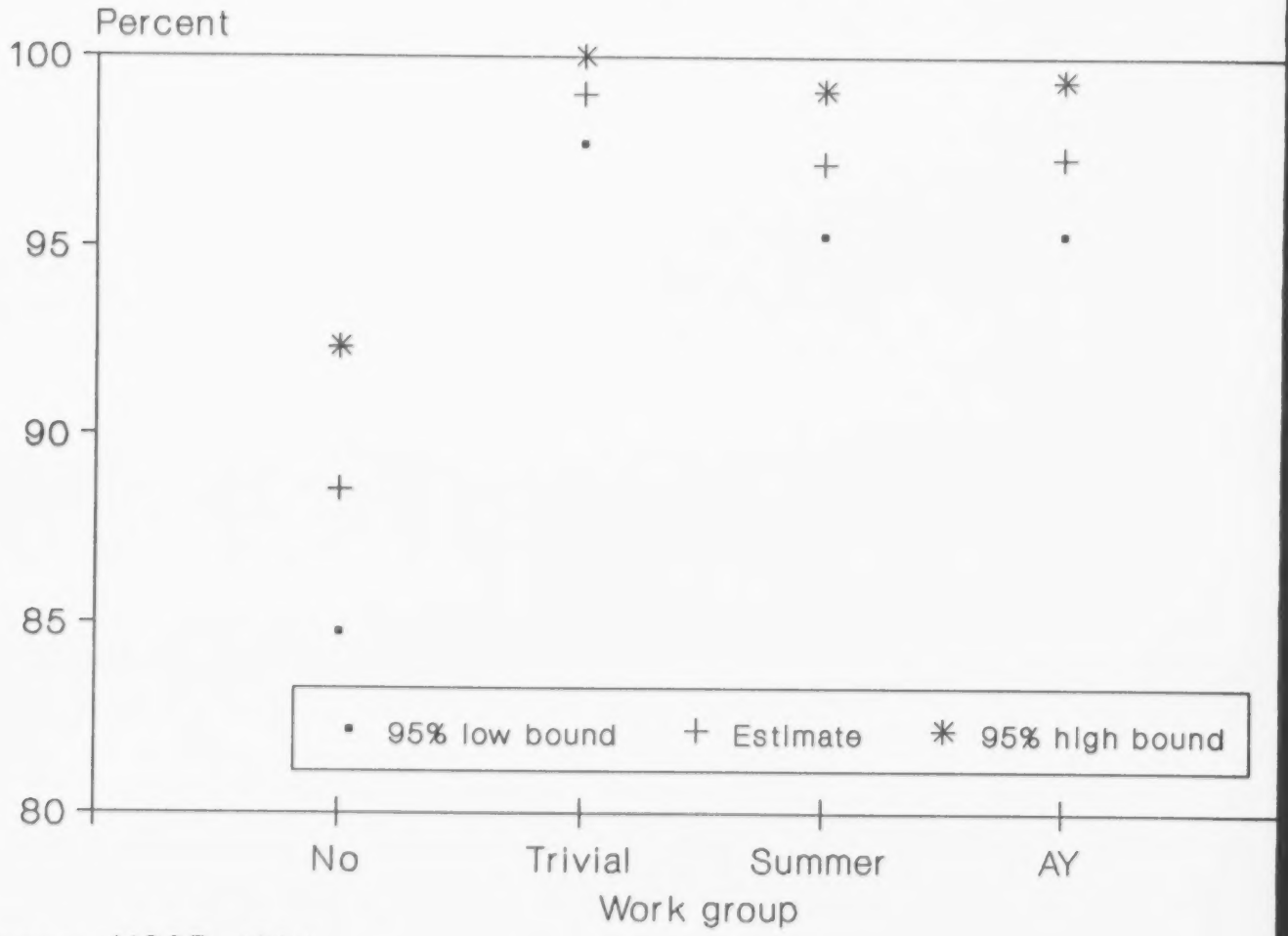
Source: HS&B, 1984

Figure 3
1982-83 Academic year persistence



Source: HS&B, 1984

Figure 4
1983-84 Academic year persistence



Source: HS&B, 1984

Type of postsecondary institution. Descriptive persistence estimates for different types of postsecondary institutions are shown in table 49. During AY 1980-81, the *AY work* group persisted better than the *No work* group (94 vs. 87 percent) ($p<.10$). This was also true in public 2-year colleges (88 vs. 74 percent).

It should be noted that type of postsecondary institution applies to a specific year. For example, a student may have been enrolled in a public 2-year institution for AY 1980-81, a public 4-year institution for AY 1981-82, and a private 4-year institution for AY 1982-83 and AY 1983-84. Because of the 4-year nature of the data, students could have been in public 2-year institutions only for AY 1980-81 and AY 1981-82. In addition, students could have been in other types of schools only for AY 1980-81. For these students to continue into AYs 1982-84, they must have transferred to a 4-year college.

Race/ethnicity. During AY 1980-81, black students attending public 4-year colleges and universities persisted better if they worked during the academic year (86 vs. 97 percent, table 51).

Family income. The effects of work within specific family income groups are shown in tables 50 and 51. All of the differences in the employment groups failed to be significant within specific family income categories.

Ability level. The regression indicates that employment displayed a large, positive effect on persistence for low ability students. For example, 80 percent of students in public 4-year institutions who did not work in 1980-81 persisted (table 51). Ninety-eight percent of students who worked during the academic year persisted.

Table 49.--Percent of persisting 1980 high school seniors, by type of postsecondary institution and by type of employment: AY 1980-81 to 1981-84

Type of institution and employment	Academic year			
	1980-81	1981-82	1982-83	1983-84
Private 4-year				
Total	93.6 (1.05)	88.8 (1.53)	97.5 (0.71)	97.7 (0.83)
No work	93.3 (1.90)	88.6 (3.97)	95.8 (1.62)	90.9 (3.74)
Trivial work	94.2 (2.61)	95.0 (3.09)	98.9 (1.06)	100.0 (0)
Some work	93.6 (1.41)	88.1 (1.79)	98.3 (0.62)	99.3 (0.32)
Summer work	95.8 (1.40)	89.9 (2.00)	98.8 (0.52)	99.3 (0.45)
AY work	97.0 (2.16)	95.9 (1.63)	99.4 (0.42)	99.5 (0.37)
Public 4-year				
Total	89.9 (0.98)	88.4 (1.03)	93.5 (0.90)	94.4 (0.88)
No work	86.9 (2.12)	85.8 (2.78)	93.4 (1.25)	87.6 (2.29)
Trivial work	91.2 (2.09)	92.6 (2.29)	93.4 (3.28)	98.7 (0.91)
Some work	90.9 (1.28)	88.4 (1.23)	93.7 (1.45)	95.4 (1.34)
Summer work	89.6 (1.80)	86.9 (1.74)	92.2 (2.11)	97.2 (1.17)
AY work	93.7 (2.88)	89.5 (3.10)	99.8 (0.13)	93.8 (2.52)
Public 2-year				
Total	76.9 (1.60)	74.4 (2.20)		
No work	74.4 (3.11)	68.1 (5.60)		
Trivial work	75.0 (3.81)	80.1 (4.81)		
Some work	79.2 (2.16)	74.4 (2.59)		
Summer work	81.4 (2.79)	75.6 (3.37)		
AY work	87.6 (5.63)	68.8 (9.68)		
Other institutions				
Total	73.0 (2.89)			
No work	72.1 (5.19)			
Trivial work	75.7 (5.40)			
Some work	72.2 (4.42)			
Summer work	67.5 (6.41)			
AY work	99.5 (0.47)			

NOTE: Figures enclosed in parentheses are standard errors.

Table 50.--Percent of persisting 1980 high school seniors in private colleges and universities, by type of employment and selected characteristics: Academic year 1980-81

Student characteristics	No work	Trivial work	Some work	Summer work	AY work
Sex					
Male	92.9 (3.25)	96.1 (3.30)	94.7 (1.69)	95.6 (2.08)	99.5 (0.55)
Female	93.6 (2.28)	92.4 (4.04)	92.5 (2.26)	96.1 (1.90)	95.2 (3.70)
Race/ethnicity					
Hispanic	79.2 (10.62)	n<20	94.3 (3.47)	99.7 (0.26)	100.0 (0)
Black	87.4 (5.17)	100.0 (0)	88.0 (5.53)	95.8 (2.44)	83.4 (11.92)
White	93.9 (2.19)	93.5 (3.03)	94.2 (1.49)	95.7 (1.60)	99.5 (0.36)
Family income					
Less than $7,000	n<20	n<20	87.4 (4.88)	85.6 (8.44)	91.2 (6.31)
$7,000-11,999	n<20	n<20	87.1 (6.67)	72.7 (14.44)	100.0 (0)
$12,000-15,999	76.7 (12.36)	n<20	89.7 (5.52)	89.1 (8.05)	100.0 (0)
$16,000-19,999	82.0 (10.56)	n<20	96.3 (3.12)	98.9 (1.02)	98.9 (1.10)
$20,000-24,999	98.5 (1.36)	99.7 (.28)	92.4 (3.34)	90.0 (6.22)	98.8 (1.23)
$25,000-37,999	98.6 (1.45)	n<20	99.3 (0.54)	99.7 (0.33)	100.0 (0)
$38,000 or more	95.6 (3.08)	93.7 (5.24)	99.5 (0.38)	99.6 (0.40)	n<20
Ability level					
Low	72.3 (11.05)	n<20	96.4 (2.58)	n<20	95.1 (4.81)
Middle low	87.0 (6.67)	n<20	96.9 (1.49)	99.9 (0.07)	100.0 (0)
Middle high	94.3 (4.04)	90.8 (6.81)	88.8 (3.65)	90.8 (4.57)	98.9 (1.07)
High	97.0 (2.30)	95.9 (3.40)	95.8 (1.60)	95.3 (2.33)	99.6 (0.44)

NOTE: Figures enclosed in parentheses are standard errors.

Table 51.--Percent of persisting 1980 high school seniors in public colleges and universities, by type of employment and selected characteristics: Academic year 1980-81

Student characteristics	No work	Trivial work	Some work	Summer work	AY work
Sex					
Male	87.1 (3.12)	88.6 (3.60)	92.5 (1.56)	92.0 (2.03)	91.2 (5.45)
Female	86.8 (2.78)	92.9 (2.55)	89.3 (1.98)	86.6 (3.19)	95.9 (2.53)
Race/ethnicity					
Hispanic	86.3 (4.49)	86.9 (6.02)	83.9 (3.86)	81.7 (5.48)	100.0 (0)
Black	85.5 (2.77)	87.9 (4.35)	89.2 (2.89)	92.1 (2.16)	97.0 (1.57)
White	86.6 (2.62)	91.6 (2.34)	91.1 (1.48)	89.4 (2.11)	92.2 (4.17)
Family income					
Less than $7,000	80.0 (7.53)	n<20	88.1 (3.43)	78.3 (6.53)	92.4 (5.46)
$7,000-11,999	88.5 (5.91)	87.6 (7.25)	93.8 (2.00)	91.1 (3.93)	98.4 (1.64)
$12,000-15,999	87.1 (6.39)	98.6 (1.04)	81.9 (5.12)	79.4 (7.18)	86.9 (10.22)
$16,000-19,999	85.8 (5.74)	91.2 (5.84)	94.5 (2.26)	95.0 (2.75)	97.3 (1.96)
$20,000-24,999	88.2 (5.02)	99.3 (0.66)	91.2 (2.83)	90.4 (3.88)	100.0 (0)
$25,000-37,999	90.0 (4.14)	75.9 (7.56)	94.0 (2.12)	91.1 (3.41)	100.0 (0)
$38,000 or more	94.3 (2.40)	97.3 (1.56)	88.9 (3.29)	88.3 (4.47)	n<20
Ability level					
Low	79.5 (6.36)	98.2 (1.86)	84.9 (4.05)	86.2 (4.99)	97.7 (2.25)
Middle low	85.8 (4.78)	82.1 (6.15)	87.0 (3.70)	84.9 (5.22)	96.2 (2.72)
Middle high	87.1 (3.73)	90.1 (4.46)	87.8 (2.74)	85.8 (4.03)	90.4 (5.99)
High	90.6 (2.81)	97.4 (0.97)	95.8 (1.24)	94.7 (1.80)	100.0 (0)

NOTE: Figures enclosed in parentheses are standard errors.

Appendix A

Methodology and Technical Notes

Appendix A

Methodology and Technical Notes

This report contains data from the High School and Beyond first (1982) and second (1984) followups of 11,995 high school seniors who began with the study in 1980. These students responded to questionnaire items concerning when and where they attended postsecondary institutions and to items concerning employment. In addition, the student financial aid records from the postsecondary institutions attended and data from the Pell Grant award files, U.S. Department of Education, were merged with the HS&B data. These records were the basis of the estimates in this report. Interested readers should consult *High School and Beyond 1980 Senior Cohort Second Follow-Up (1984) Data File User's Manual (C. Jones, et al, Chicago: National Opinion Research Center, 1986)* and *High School and Beyond Financial Aid Supplement (Senior Cohort) Data File User's Manual (J. Smith & K. Hall, Rockville, MD: Westat, Inc., 1987)* for further details concerning the HS&B data.

Not all 11,995 of the HS&B seniors attended postsecondary education institutions during 1980-84. Over 4,200 of the HS&B seniors never attended postsecondary during 1980-84. An additional 958 delayed their entry past AY 1980-81, and 717 began their studies in AY 1980-81 part time.

The analyses in this report focused on traditional students. The estimates, while valid for traditional students, may not show appropriate trends or institutional comparisons for other, nontraditional students. Traditional students enter college full time immediately after high school graduation and attend continuously for 4 years. Nontraditional students differ from this pattern by delaying entry, attending part time, or stopping/dropping out. There is some evidence that private colleges and universities may have fewer nontraditional students enrolled than public colleges and universities.

The sample sizes used for the analyses presented in this report were about 5,500 for AY 1980-81, 3,900 for AY 1981-82, 2,500 for AY 1982-83, and 2,200 for AY 1983-84. All estimates were calculated using FU2WT, a weight designed for use with HS&B second followup data.

Accuracy of Estimates

The statistics in this report are estimates derived from a sample. Two broad categories of error occur in such estimates: sampling and nonsampling errors. Sampling errors happen because observations are made only on samples of students, not on entire populations. Nonsampling errors happen not only in surveys of sample groups but also in surveys of complete censuses or entire populations. These errors can be attributed to a number of sources: inability to obtain complete information about all students in all schools in the sample (such as some students or schools refused to participate, or students participated but answered only certain items); ambiguous definitions; differences in interpreting questions; inability or unwillingness to give correct information; mistakes in recording or coding data; and other errors of collecting, processing, sampling, and estimating missing data.

The accuracy of a survey result is determined by the effects of sampling and nonsampling errors. In surveys with sample sizes as large as those in the HS&B study, sampling errors generally are not the primary concern, except where separate estimates are made for relatively small subpopulations such as Asians or American Indians. In this report, small sample sizes were a problem for some subgroups. In some cases, entire rows were deleted from tables, in others cell entries were flagged as *n<20*, due to small sample sizes.

The nonsampling errors are difficult to estimate. The major sources of nonsampling error considered were nonresponse bias and the reliability and validity of the data. The HS&B instrument response rates were all above 85 percent and the item response rate within instruments, for the items used to develop the estimates in this report, were above 95 percent. The weights used to calculate the estimates were constructed in a fashion that compensated for instrument nonresponse. Investigations of the nonresponse bias found no major problems (see *High School and Beyond First Follow-Up (1982) Sample Design Report*, by R. Tourangeau, H. McWilliams, C. Jones, M. Frankel, and F. O'Brien, Chicago: National Opinion Research Center, 1983).

The reliability and validity of the HS&B data have been examined in *Quality of Responses of High School Students to Questionnaire Items* by W. Fetters, P. Stowe, and J. Owings, Washington: Center for Education Statistics, 1984. This study found that the reliability and validity of responses vary considerably depending on the item and the characteristics of the respondent. Contemporaneous, objective, and factually-oriented items are more reliable and valid than subjective, temporally remote, and ambiguous items. Older, white, or high-achieving students provide more reliable and valid responses than do younger, minority group, or low-achieving students. The estimates in this publication are reasonably reliable and valid.

Confidence Levels

The descriptive comparisons were based on **Student's t** statistics. Comparisons based on the tables include the estimates of the probability of a Type I error, or p-values. The p-values were determined by comparing the **Student's t** values with 1.64, 1.96, and 2.54 for the 90, 95, and 99 percent confidence levels, respectively. To obtain the confidence level for these comparisons, the p-value may be subtracted from 1. For example, a $p<.01$ indicates a confidence of at least 99 percent (1-0.01= 0.99).

Standard errors were included in each descriptive table for interested readers. **Student's t** values may be computed for comparisons using these tables' estimates with the following formula:

$$t = \frac{P_1 - P_2}{\mathrm{SQRT}(se_1 * se_1 + se_2 * se_2)}$$

where, P_1 and P_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors.

The regression analyses presented in this report were computed using PROC REG of the Statistical Analysis System (*SAS User's Guide: Statistics*,

1982 Edition, Cary, NC: SAS Institute, 1982). Although all models were based on covariance matrices computed using FU2WT, and the degrees of freedom were adjusted appropriately, the resulting estimates were biased. The bias was due to the stratified design of HS&B. **SAS PROC REG** uses simple random sample techniques for the computation of estimates. Simple random sample techniques bias the estimates when the sample is complex as is true for HS&B.

In response to this problem, two actions were implemented for the regression analyses presented in this report. First, for each variable in the model (e.g. type of postsecondary institution, academic year, and sex), a new model was estimated excluding the variable. The R^2 of the full model (including the variable) was reported, as well as the R^2 of the reduced model (excluding the variable). F-statistics were calculated comparing these two R^2's. Hence, the bias of the difference in R^2's should have been small.

Second, confidence in the F-statistics were based on conservative critical values (table A.1). Rather than the typical .90, .95, and .99 levels of confidence, more conservative .99, .995, and .999 levels were used. This adjustment should more than compensate for any remaining biases.

Table A.1--Critical values for F statistics

F (df, infinity)	Level of Confidence		
	.99	.995	.999
F (1,oo)	6.63	7.88	10.83
F (3,oo)	3.78	4.28	5.42
F (4,oo)	3.32	3.72	4.62
F (6,oo)	2.80	3.09	3.74
F (18,oo)	1.96	2.10	2.40

In tables 2, 27, and 48, the dependent variables were dichotomous (e.g., employed or not employed). In these tables, a variable was used for the regression that had 0 and 100 values, rather than the typical 0,1-values. This rescaling of the dependent variable allowed the regression parameters to be interpreted as percentages.

Appendix B

Supporting Table for Figures 1 through 4

Table B.1.--Percent of 1980 HS&B seniors persisting for 8 or 9 months, by employment group: Academic years 1980-81 to 1983-84

Employment group		Academic year			
		1980-81	1981-82	1982-83	1983-84
Total		85.5	85.0	94.8	95.5
	s.e.	0.69	0.86	0.68	0.64
	unwt n	5,465	3,875	2,476	2,194
	wt n/1,000	1,448	1,006	663	592
No work		82.7	82.4	94.0	88.5
	s.e.	1.46	2.28	1.08	1.92
	unwt n	1,538	681	1,183	595
	wt n/1,000	394	156	310	156
Trivial work		84.9	88.7	95.3	99.0
	s.e.	1.70	2.14	2.23	0.67
	unwt n	894	424	167	713
	wt n/1,000	253	113	49	198
Some work		85.4	low n	low n	low n
	s.e.	11.06	low n	low n	low n
	unwt n	35	23	7	6
	wt n/1,000	9	low n	low n	low n
Summer work		85.8	84.4	94.1	97.2
	s.e.	1.07	1.13	1.24	0.98
	unwt n	2,282	2,195	708	524
	wt n/1,000	647	624	221	166
AY work		93.3	88.0	99.3	97.3
	s.e.	1.67	2.26	0.33	1.04
	unwt n	716	552	411	356
	wt n/1,000	144	106	82	71

Appendix C

Occupational Classification

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APPENDIX C

OCCUPATIONAL CLASSIFICATION

The classifications of jobs were based on the High School and Beyond (HS&B) occupational code found in the HS&B Data File User's manual. There are 12 major categories, but due to the nature of the employment data of students in this report, the job categories were expanded to 19. For example, sales clerks (283), bookkeepers (305), cashiers (310), receptionists (364), and secretaries (371-372) were withdrawn from sales and office workers and created as independent occupational types, since the frequencies for these job types were relatively large. The codes for the 19 categories were as follows:

001-245 **Technical, professional, managers and administrators**
All professionals, technicians (including researchers), writers, artists and entertainers, managers and administrators, except farm

283 **Sales clerks**
305 **Bookkeepers**
310 **Cashiers**
364 **Receptionists**
371-372 **Secretaries**
394-395 **Clerks**

260-392 **Sales and office workers** (excluding 283, 305, 310, 364, 371-372)
Salesmen, advertising, real estate and insurance agents, brokers, newsboys, hucksters, peddlers, bank tellers, billing, file and counter clerks, collectors, estimators, investigators, mail workers, office machine operators

401-590 **Craftsmen and kindred workers**
Carpenters, electricians, foremen, inspectors, machinists, auto and heavy equipment mechanics, painters, plumbers, printing press workers, repairmen, former members of the Armed Forces, and all kindred workers

750-751 **Construction workers**

762 **Stockworkers**
Stock handlers and baggers, goods layers

601-770 **Operatives, except Transport** (excluding 750, 751, 762)
Textile, machine, mine, forklift and tow motor, laundry and dry cleaning operatives; meat cutters and butchers, packers, welders, drivers, deliverymen, animal caretakers, freight and material handlers, lumbermen, vehicle washers, and equipment cleaners

780-785 **Laborers**

801-824 **Farmers**
Farmers (owners and tenants) and farm managers, farm laborers and farm foremen, farm service laborers

901-903 **Cleaning service workers**
Chambermaids, maids (except private households), cleaners and charwomen, janitors and sextons

910-916 **Food service workers**
Cooks (except private households), waiters, busboys, food counter and fountain workers, dishwashers, and all other food service workers

921-926 **Medical workers**
Dental assistants, practical nurses, nursing aides, orderlies and attendants, health aides and trainees, and lay midwives

932 **Recreation attendant**

931-982 **Personal and protective service workers** (excluding 932)
Policemen and detectives, firemen, guards and watchmen, personal service attendants, hairdressers and cosmetologists, baggage porters and bellhops, housekeepers and child care workers (except private households)

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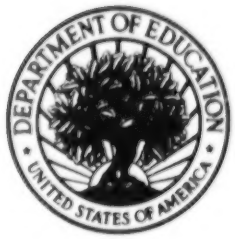
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